



ASHRAE Ottawa Valley Chapter

DATE: **Tuesday November 17, 2015**
(Social: 17:30, Dinner: 18:30, Program: 19:30)

LOCATION: **Algonquin College Restaurant International**
1385 Woodroffe Ave, Building D, Salon D
NEW LOCATION! Please see Page 2 for directions

PROGRAM: **NRC Sussex Drive Project**

SPEAKER: **Mark Newman & Dave Seymour**

SPEAKER BIO:

Mark Newman, P. Eng. is a mechanical engineer with over 20 years' experience in building systems and energy management. He began his career in the private sector as a consulting engineer in both the building and heavy industrial fields. His career path led him to work for Tesco, an Energy Service Company, as a project engineer before moving to JDS Uniphase as a product line engineer. He joined the public sector in 2002, working for PWGSC and then Natural Resources Canada. He has managed and promoted government energy service contracts at various departments; worked to update the National Energy Code for Buildings; and served as a technical authority on building energy efficiency programs. Mark is currently NRC's Energy Manager.

David Seymour, P. Eng., MBA is Vice President – Eastern Region at Ameresco Canada responsible for operations in Eastern Ontario & Western Quebec. Dave has been involved with bringing a variety of energy and facility renewal services to customers throughout the region helping owners and managers achieve asset renewal and reduced operating costs. He brings over thirty-seven years of experience in project management and facilities management and has been responsible for the successful operations of Ameresco in Ottawa since opening the branch in 1993. Dave has extensive experience working with institutional customers such as government, colleges, universities and school boards in finding creative solutions for dealing with their building renewal and energy efficiency challenges. Dave is a member of the Professional Engineers of Ontario (PEO), past member of the BOMA Ottawa Board of Directors and past Chair of the BOMA Environment and Energy Committee. He is a graduate of Carleton University (B. Eng.) and the University of Ottawa (MBA).

Chapter Members: \$45.00 Guests: \$65.00
Student Members: \$30.00 Life or Fellow: \$45.00

Space is limited so please register online at:

<https://ashraeottawa.simplesignup.ca/en/610/index.php?m=eventSummary>

President's Message

Dear members,

When frigid air sweeps across the Ottawa Valley and holiday decorations sneak up around us, it is hard not to think Christmas is right around the corner. As part of this holiday tradition, we give donations to charities, people who are in need, and also organizations we support. In the spirit of the holidays, we will use our **November 17th** meeting to celebrate **Research Promotion** to remind our members of the organization that impacts all of our careers. Our RP Chair, **Abbey Saunders**, will be recognizing last year's contributors at this meeting. She and her team of volunteers will be contacting you throughout the year and asking for your donations to help keep **ASHRAE** research funds at a level that will continue to help improve and grow our industry.

There are a few other important

events planned for this month that are worth mentioning. We are hosting our first technical tour of the year at the **Bank of Canada Head Office**, taking place on the same day as the program meeting and hosted by **Patrick St-Onge**. Please refer to the article in the communique for more information on the tour and how to register. We also have our bowling social that is taking place on **November 18th** at the **Merivale Bowling Center** which is bound to be a blast. Please see **Adam Moons'** article for more details on how to register.

Also, please note that our **November** meeting will not be located in the same room where we typically meet. We have attached below some instructions and details explaining where the meeting will take place and areas you can park. We will have signage posted in the corridors to help get you to the meeting



President
Georges Maamari

2015-2016

OVC President

BPA

E-mail: gmaamari@bpa.ca

venue. Our speakers will be **Mark Newman** and **Dave Seymour** who will be hosting a presentation on the **NRC Sussex Project**. To register please go to our website at www.ashrae.ottawa.on.ca and click on the November meeting program link.

I look forward to seeing many of you at this meeting.

Best regards,

Georges Maamari, P.Eng
2015-2016 OVC President

New Location for November Meeting

Please note the new location for the **November meeting**. It will be held at the **Algonquin College Building D, Salon D**. Guests can park in lots 8, 9 or 12; there is no charge after 5pm. The best way to enter is

through building E, the Student Commons. Please see the campus map below for reference.



Technical Tour Bank of Canada Head Office

DATE & TIME: Tuesday November 17, 2015
from 15:00 to 16:00

LOCATION: Bank of Canada Head Office
234 Wellington Street

DESCRIPTION:

The Bank of Canada Head Office is presently undergoing a major renovation. The building consists in two 12-storey glazed towers joined together by an atrium and an older 5 story masonry building built in 1930 also integrated in this modern architecture. The building was designed by the famous Canadian architect Arthur Erickson. The renovation started in January 2013 and is planned for substantial completion in the fall of 2016.

Some of the interesting features that will be presented include an active double skin wall to improve efficiency of the envelope as well as a heat recovery chiller to minimize the need for steam from cliff street plant. The very rigid concept of the building which includes structural coffered ceilings has led to a series of very innovative concepts : coffered are filled with radiant cooling panels to handle 50% of the sensible load, carefully coordinated mechanical and electrical systems with custom demountable partitions will allow the fit-up of new offices over a weekend. A mock-up of a complete fit-up has been built and will be shown.

GATHERING POINT:

**CD Howe Building (240 Sparks), Security Desk on Ground Floor
Parking is available at the CD Howe Building (Entrance from Queen Street)**

Parking fees will be reimbursed by the Chapter upon the presentation of a receipt at the Chapter meeting.

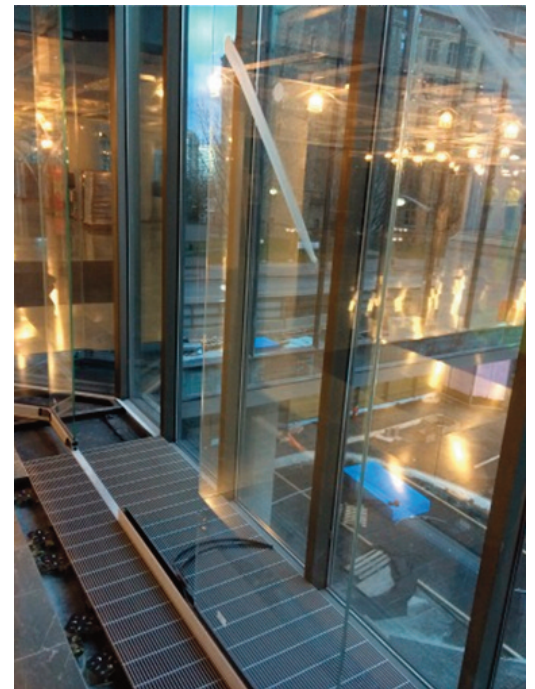
IMPORTANT NOTE:

PPE required (Safety Boots, Hard Hat, Safety Glasses and Vest). Send an email to pstonge@bpa.ca if you need to borrow PPE, we will make sure to have some available for you.

Click on this link to register: <https://ashraeottawa.simplesignup.ca/en/1247/index.php?m=eventSummary>



TYPICAL OFFICE



DOUBLE-SKIN WALL

2015-2016 Research Promotion Campaign

We are off...our **2015-2016 RP Campaign** has started! Our objective for the campaign is \$27,000. No donation is too small, and all money raised goes to **ASHRAE Research Canada**.

ASHRAE Research plays a huge role in all aspects of our built environment. Our homes, offices, schools, hospitals, retail spaces and even the food we eat are all affected and hopefully protected by their HVAC&R system, or lack thereof. To get a glimpse of ASHRAE Research funding at work, the table shown in the following page lists few ASHRAE Research funded projects currently ongoing in **Canada**.

The **October** program meeting RP raffle tickets for the **Oct 28 Calgary v. Senators** game raised a total of \$680 for ASHRAE Research, your support is fantastic. A special thanks

to **Airtron** for donating the tickets, and congratulations to **Jordan Dick** of **E.H. Price** winner of the tickets.

To date, we are approximately **10%** toward our campaign goal. Great start everyone!

Reminder: formal donor recognition for all 2014-2015 RP Campaign donors will take place at the November program meeting.

A list of current 2015-2016 RP Campaign donors will be updated for each monthly newsletter, so donate quickly to see you name appear!

Two of the easiest ways to make your donation to the 2015-2016 RP Campaign are by clicking either of the links below.

However, should you wish to make



President-Elec Abbey Saunders
2015-2016
Research Promotion
National Research Council Canada

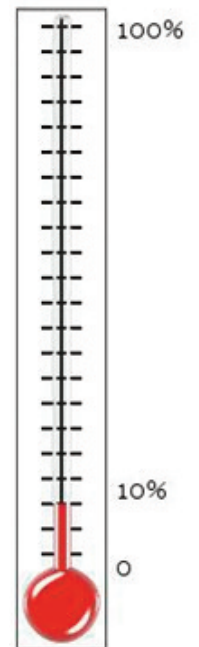
E-mail: abbey.saunders@nrc-cnrc.gc.ca
you donation using cheques, please make all cheques payable to **ASHRAE Research Canada**. My contact details are shown below, but I will gladly make arrangements to pick-up any cheques if need be.

Again, I can't say this enough thanks for your continued support for **ASHRAE Research Canada!**

Abbey Saunders
613.993.9277
fax: 613.957.9828
Engineering Services, Administrative Services and Property Management Branch
National Research Council Canada
Bldg M-19, 1200 Montreal Road,
Ottawa, ON K1A 0R6

ASHRAE OVC link: <https://ashraeottawa.simplesignup.ca/en/171/index.php?m=eventsList>
ASHRAE Society link: <https://xp20.ashrae.org/secure/researchpromotion/rp.html>

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 <p>DANNY DILLON, GSC PRESIDENT</p> <p>1481 Cyrville Road Ottawa, ON K1B 3L7 Ph. 613.741.7731 Cell. 613.880.8504 Fax. 613.741.9962 danny@dilfo.com</p> <p>DILFO.COM</p>  	 <p>Goodkey, Weedmark & Associates Limited Consulting Engineers</p> <p>Ross McIntyre, P.Eng. Principal, Designated Consultant, Mechanical Engineer</p> <p>1688 Woodward Dr., Ottawa, ON, Canada, K2C 3R8 Telephone: 613-727-5111 ext. 239 Fax: 613-727-5115 rossmo@gwal.com</p> 	 <p>Building System Surveys / Design & Retrofit AutoCad System Design & Customization</p> <p>Roderic S. Potter Principal</p> <p>3 Rochester Street Carleton Place ON K7C 2P9</p> <p>www.rodgers.com info@rodgers.com cell 613.266.2134</p> 
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Description	Location & Researcher	Value
Performance of Pressurized Stairwells with Open Doors	National Research Council Canada – Ontario, Canada	\$179,728
Characterization of Liquid Refrigerant Flow Emerging from a Flooded Evaporator Tube Bundle	NOVUS ENVIRONMENTAL, INC. – Ontario, Canada	\$142,000
Update Climatic Design Data in Chapter 14 of the 2013 Handbook of Fundamentals	NUMERICAL LOGISTICS – Waterloo, Canada	\$138,477
Calibrating a Building Energy Model on a Component Level Using a Bottom-up Based Methodology	CONCORDIA UNIVERSITY – Nicholas Zibin	\$10,000
Integrating thermal energy storage into hybrid solar assisted heat pump systems for residential houses in cold climate	RYERSON UNIVERSITY - Navid Ekrami	\$10,000
Study on an advance hybrid air filtration system	TIANJIN UNIVERSITY - Zhuangbo Feng	\$10,000
Occupant-Learning Blinds and Lighting Automation	CARLETON UNIVERSITY - Burak Gunay	\$10,000
Advanced models of fire smoke transport in high rise buildings	CONCORDIA UNIVERSITY - Dahai Qi	\$10,000
The protective effect of buildingsL characterizing indoor air quality, infiltration and ventilation	UNIVERSITY OF TORONTO - Donna Vakalis	\$10,000
Performance improvement of solar assisted heat pumps by integrating a ventilated/active thermal mass	RYERSON UNIVERSITY - Navid Ekrami	\$10,000
Integration of phase change materials into geothermal boreholes	ECOLE POLYTECHNIQUE DEMONTREAL - Laurent Gagne-Boisvert	\$10,000
Development of a low cost particle analysis technique	UNIVERSITY OF TORONTO - Daniel Haa-land	\$10,000
Development and evaluation of novel membrane liquid desiccant air conditioning systems for hot-humid and cold-dry climates	UNIVERSITY OF SASKATCHEWAN - Mo-hamed Abdel-Salam	\$10,000
Design and heat moisture transfer performance of 3-fluid liquid-to-air membrane energy exchanger for energy recovery applications and solar air conditioning systems	UNIVERSITY OF SASKATCHEWAN - Mo-hamed Abdel-Salam	\$10,000
TOTAL:		\$570,205

Membership Update

The **Ottawa Valley Chapter** of **ASHRAE** will soon be publishing an updated roster. This roster is created with membership information provided by ASHRAE Society. The **Ottawa Valley Chapter** will be printing the roster at the beginning of **January 2016**. We kindly ask that you take the time to update your **ASHRAE Biographical Record** to ensure that the correct information is transferred to the roster. Every Ottawa Valley Chapter member should have received by email a

document showing the procedure on how to update your profile. If you have any questions regarding this please contact me or any members of the board of governors.

I would also like to introduce and welcome the following new member:

Mr Patrice Pinel
Mr John Jarrett

Looking forward to seeing you at the next **ASHRAE** event!



Committee Chair

Celine Baribeau
2015-2016
Membership
Committee Co-chair
BPA

E-mail: cbaribeau@bpa.ca

<p>Rod Lancefield, P.Eng., LEED® AP Engineering Sales rod@htseng.com C 613.851.1997</p> <p>HTS Ottawa 1646 Woodward Dr. Ottawa, Ontario K2C 3R8 T 613.728.7400 Ext.221 F 613.728.8032 Toll Free 888.280.8544</p> <p>ontario.htseng.com</p> 	<p>InAIR Environmental Ltd.</p> <p>Lan Chi Nguyen Thi, P.Eng. Partner 1390 Prince of Wales Dr., Suite 503 Ottawa, Ontario K2C 3N6 Phone 613.224.3863 Fax 613.224.2561 lanchi.nguyen@inairenvironmental.ca www.inairenvironmental.ca</p> <p>Mould & Flood Remediation Drinking Water Testing Training Courses IAQ Surveys</p> 	<p>Jp2g Consultants Inc. ENGINEERS • PLANNERS • PROJECT MANAGERS</p> <p>Greg Terry, P. Eng. Mechanical Engineer</p> <p>1150 Morrison Drive Suite 410 Ottawa, Ontario K2H 8S9</p> <p>Phone: 613-828-7900 Fax: 613-828-2600 email: gregt@jp2g.com</p>
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2015 Bowling Social

Ladies and Gentlemen,

Just a reminder that the 2015 **ASHRAE** Bowling Social will be held on **Wednesday November 18th, 2015** at the **Merivale Bowling Center** (1916 Merivale Rd., Ottawa, www.merivalebowlingcentre.com). Registration will run through to the **11th of November**, so sign up soon!

The format will be three games with 4 people per lane. **7:00pm** start. Please show up at **6:30pm** to register. The entry fee is **\$200** per foursome, or **\$60** per individual. The entry fee includes warm-up, 3 games, shoe rental and plenty of nachos/wings/

Link: <https://ashraeottawa.simplesignup.ca/en/1138/index.php?m=eventSummary>

pizza. Individual participants will be assigned into groups of four.

This is intended to be a social event to promote the camaraderie and fellowship of **ASHRAE**, please consider attending. Numbers need to be finalized by the first week of November, so please register early. Registration can be done on-line via the link below. Registrations will be confirmed via email receipt. If you have any questions, or need more information, please don't hesitate to contact me.

Payment can be made during the online registration.



Governor **Adam Moons**

2015-2016 Member-
ship Committee Co-
chair
**Walmar Ventilation
Products**

E-mail: adam@walmar.net

Adam Moons
Walmar Ventilation Products
24 Gurdwara Rd. Nepean, On.
Cell: 613-323-5341
adam@walmar.net

ASHRAE HVAC Design Training Coming to Halifax

The **Ottawa Valley Chapter** is pleased to inform you that the 3-day **HVAC Design: Level I – Essentials** training is confirmed for **May 9-11, 2016** in **Halifax, Nova Scotia**. The instructor for this course is **Joel Primeau**. As most of you know, Joel has been involved with **ASHRAE Society** for quite some time now and has helped develop this course. Although Halifax is some distance away

from Ottawa, it may prove to be well worth the investment.

I would invite you to visit www.ashrae.org/hvacdesign for more details and to register.

Best regards,

Georges Maamari, P.Eng
2015-2016 OVC President



President **Georges Maamari**

2015-2016
OVC President
BPA

E-mail: gmaamari@bpa.ca

Letter from our Region II DRC, Doug Cochrane

My Fellow Region II members,

I am writing to ask you to attend the **2016 ASHRAE Winter Conference**, Jan. 23-27 in **Orlando**, along with the **ASHRAE co-sponsored AHR Expo**, Jan. 25-27. If you have already registered for this event, then thank you, and I look forward to seeing you.

By attending the Conference, you have an opportunity to discuss and examine the latest topics in the building industry; to share ideas with like-minded professionals from around the world as well as participate in technical tours; technical and standing committees; technical program; attend **ASHRAE Learning Institute** courses; earn professional credits; and obtain **ASHRAE** certifications. There is also social events like the Welcome Party (at Seaworld Sat night); President's Luncheon (Mon); and Members night out (Tues); with the free Plenary Sat afternoon featuring **Laura Schwartz**, the White House director of events for the Clinton Administration as the keynote speaker on the topic Empowerment Through Service.

The Conference features peer-to-peer information exchange through 300+ presentations along with 600+ meetings to write standards, identify research and update current practices. And you don't want to miss the **AHR Expo** next door to the Headquarter Hotel – the world's largest HVAC&R event with 2,000+ exhibitors.

Together, the **ASHRAE** Conference and the **AHR Expo** combine to create the ideal atmosphere to network, inspect the latest technology and learn about the newest practices for the built environment.

As a long-time **ASHRAE** member, I assure you that you'll want to experience first-hand this dynamic event. If you are a first-time Conference attendee, you are eligible for special member rates of **\$395** by **Nov. 3**; **\$525** beginning **Jan. 1**.

The networking and opportunities to learn current industry practices that you can take back to your employer are tremendous! If you are able to attend, please drop me a note so I



President
Georges Maamari

2015-2016

OVC President

BPA

E-mail: gmaamari@bpa.ca

can make sure you are made aware of our regional dinner (which will be combined with our sister Canadian region XI Sun night at 8 pm as most AHR receptions occur Mon night) and any other special events planned for our regional members. It would be great if at least one person from your chapter would attend and then report on their experiences at a chapter meeting.

You can find complete conference information at:
www.ashrae.org/orlando

I hope to see you there.

Thanks for your consideration.

Doug C. Cochrane, P.Eng., LEED AP
Director and Regional Chair - II

2016 ASHRAE Winter Conference

Jan. 23–27 | Orlando Hilton | Orlando, Fla.

*New Technical Program Tracks, Networking,
World's Largest HVAC&R Marketplace*

Special first time attendee registration fee available! Low, early-bird registration rates end Nov. 2. Register early! Registration to the ASHRAE Winter Conference includes free access to the AHR Expo!



2016 AHR Expo
Jan. 25–27 | Orange Co.
Conv. Center | Orlando, Fla.



Venues are strategically located next to each other for easy access.

Table Top Display

What better way to display a new product, existing line, or share great ideas than to have a table-top display at our local **OVC ASHRAE** meetings? The **OVC** meetings provide a captive audience in the industry and exposure to 60+ people.

We are currently have some table top

openings for the **January** and **February** meetings.

The featured table-tops for the **November 17th** meeting are **Schneider Electric** and **Bousquet Technologies** presented by **Master Group**.

Committee Chair

Shayan Mirza

2015-2016

Table Top Committee Chair

Total HVAC

E-mail: shayanm@totalhvac.com

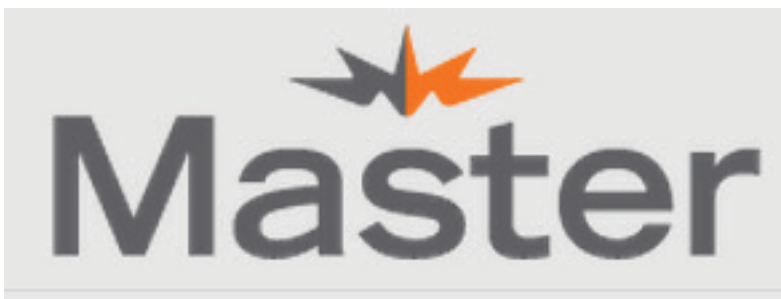
Please contact **Shayan Mirza** to secure yours today! Cost for table tops is \$225 and spaces are filling up



Schneider Electric's EcoBuilding Division will be show casing the **SmartStruxure Lite** and **Room Controller** product lines:

SmartStruxure Lite solution is a fast, easy way to future-fit small- to medium-sized buildings using Web and wireless technology to control HVAC, lighting and metering. Save energy, save time, and improve comfort with minimal impact on operations. With the introduction of SmartStruxure Lite solution, small- to medium-sized buildings now have an affordable building management solution to meet their needs. By providing anytime, anywhere access to building information on a simple user interface, SmartStruxure Lite solution lowers energy costs without compromising on comfort.

SE8000 Series wired or wireless communicating Room Controllers for Zone, Fan Coil and Rooftop/Heat Pump applications offer the perfect balance between simplicity and sophistication. Providing unparalleled building performance has always been our top priority. Through a single, smart device, the SE8000 Series room controllers deliver all the comfort and control functionality found in direct digital control (DDC) systems. Our ability to significantly increase energy savings, at a lower total cost of ownership, dramatically accelerates the return on investment for most typical retrofit projects.



'BOUSQUET TECHNOLOGIES SPECIALIZES IN MANUFACTURING AIR-HANDLING UNITS

They offer direct/indirect gas-fired and electric heat units, with optional energy recovery and coils (cooling and heating) available. They offer fully customizable units ranging from small commercial (1200cfm) to large industrial projects (120, 000cfm+). The units are manufactured in Canada and are cETLus, cCSAus, cULus approved.

YEA Leadership Wrap-up

The event started on Friday afternoon and went until Sunday at lunch. We were a group of 30+ from different areas of mechanical trade from various parts of **North America**.

Throughout the weekend there were many large and small group discussions, activities and a scavenger hunt, all of which really helped the group get to know each other.

Before the seminar we were required to establish a profile. The questions evaluated our personality traits and our adjusted job behavioral traits. The presenter spent most of lecture on Friday breaking down the different personality types and discussing how our adjusted traits can either positively or negatively impact our overall success.

Saturday and Sunday the main focus was personal branding, assessing personal strengths and weaknesses, and finding ways to optimize strengths within a group.

This program helped me to recognize that if you continually build on your "brand" (stronger personality traits), rather than focussing on weaknesses, it will go a long way in creating success. Focus on the "why" – Your vision. The goal is not to do business with people who buy what you provide, it is to buy why you do it.

I have become much more aware of what leadership qualities I can provide to a team and the qualities that I must look for in colleagues/ business partners to make the overall group successful.



Committee Chair
Joe Della Valle
 2015-2016
 YEA Chair
Walmar Ventilation

E-mail: joedellavalle@walmar.net

ASHRAE provided a great event and I strongly recommend to other OVC members. My greatest thanks for the support of our Chapter in sponsoring my participation. Just another reason why involvement in the **Ottawa Valley Chapter** is fantastic!

<p>ENGINEERING PERFORMANCE...</p> <p>... mechanical, electrical, building automation, environmental, ...</p> <p>bpa advanced sustainable building systems</p> <p>Patrick St-Onge, P. Eng. LEED AP 613-596-6454 bpa.ca 1960 Robertson Road, Suite 100, Ottawa, Ontario, K2H 5B9</p>	<p>Yorkland Controls ENVIRONMENTAL SOLUTIONS</p> <p>Larry Gravelle Tel: (613) 721-3301 Fax: (613) 721-4906 1-877-733-3833 www.yorkland.net</p> <p>Honeywell BELIMO HVAC/BAS & Vulcan</p> <p>Johnson Controls FACILITY EXPLORER SIEMENS</p> <p>KMPC GREYSTONE ENERGY SERVICES</p> <p>Yorkland Controls represents leading control systems and component manufacturers. Integrated solutions for Lighting, Card Access, CCTV and Building Automation.</p>	<p>WESMECH TECHNICAL SALES INC.</p> <p>50 Ronson Drive, Suite 160 • Toronto, Ontario • M9W 1B3 Tel: 416-251-8990 • Watts: 1-800-613-3789 • Fax: 416-251-8900 www.wesmechtech.com</p> <p>Joseph McCallion, C.E.T. President</p> <p>josephm@wesmechtech.com cell: 416-720-8976</p>
<p>Smith + Andersen</p> <p>David Eastwood P.Eng. Principal 613 2301186 ext. 403 david.eastwood@smithandandersen.com</p> <p>1600 Carling Avenue Suite 530 Ottawa Ontario K1Z 1G3 t 613 2301186 f 613 2302598 smithandandersen.com</p> <p>Ottawa Vancouver Toronto Edmonton Dubai Calgary</p>	<p>Stantec</p> <p>David Yin, P.Eng., LEED AP Senior Associate, Buildings Engineering</p> <p>Stantec 400 - 1331 Clyde Avenue, Ottawa ON K2C 3G4 phone: (613) 725-5573 cell: (613) 323-4964 fax: (613) 722-2799 david.yin@stantec.com</p>	<p>TAMCO INNOVATIVE DAMPER PRODUCTS</p> <p>Experience the true meaning of service and quality</p> <p>Frank Picchione Regional Sales Manager</p> <p>Tel: 800-561-3449 Cell: 514-781-8381 Fax: 800-668-8476 frank@tamcodampers.com www.tamcodampers.com</p> <p>TAMCO locations in Ottawa, Ontario and Nashville, Tennessee.</p>
<p>Jp2g Consultants Inc. ENGINEERS ■ PLANNERS ■ PROJECT MANAGERS</p> <p>Mike Swayne, P. Eng. Director of Building Services</p> <p>1150 Morrison Drive Suite 410 Ottawa, Ontario K2H 8S9</p> <p>Phone: 613-828-7800 Fax: 613-828-2600 email: mswayne@jp2g.com</p>	<p>AMERESCO Green • Clean • Sustainable</p> <p>ROY SAMHABER, P. ENG. senior project manager</p> <p>P: 613 224 7500 x6158 P: 888 283 7267 F: 613 224 3726 rsamhaber@ameresco.com ameresco.ca Ameresco Canada Inc. 106 Colonnade Rd N, Ste 200 Ottawa, ON K2E 7L6</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Green • Clean • Sustainable</p>	<p>TOTAL HVAC</p> <p>Adam Beales Principal</p> <p>Total HVAC Inc. 14A-190 Colonnade Rd., S. Ottawa, Ontario Canada, K2E 7J5</p> <p>Tel: (613) 723-4611 Fax: (613) 723-4677 Res: (613) 825-7319 Cell: (613) 223-2112 Email: adam@totalhvac.com Web: www.totalhvac.com</p>

News Update

Cold Climate Challenges Addressed in New Publication from ASHRAE

ATLANTA – Buildings in arctic and subarctic climates face not only challenges related to cold but also remoteness, limited utilities, permafrost and extreme temperature shifts. Designers must meet these challenges while keeping occupants comfortable and minimizing impact on the environment.

The newly published “**Cold-Climate Buildings Design Guide**” from **ASHRAE** provides information on the issues commonly faced by designers in these climates. The idea for the guide came from a working session at the **7th International Cold-Climate Design Conference** held in 2012 and co-sponsored by **ASHRAE**, **SCANVAC** and **REHVA**.

“*Harmonizing human comfort with the climatic realities of these environments is a balancing act,*” **Erich Binder**, who oversaw the writing of the guide, said. “*Strategic design is key to building, commissioning and operating efficient and long-lasting cold-climate structures.*”

A cold climate is defined by a combination of factors that create a unique set of building design challenges. These factors include temperature, frozen precipitation, wind, humidity, thermal comfort, thermal envelope/enclosure, maintainability, permafrost and frozen ground and remote building locations.

Following are tips from several committee members for designing, operating and maintaining buildings and systems in cold climates:

- What happens when building air exfiltrates a building envelope in cold weather is similar to what happens in cooling coils in hot humid weather – understanding psychrometrics is essential to understanding building envelope performance in cold climates.
- The colder the climate, the more important it is for critical equipment to be sheltered – you

can't expect service personnel to properly repair HVAC equipment in a winter blizzard.

- In extreme climates, windblown snow takes on a consistency similar to sand and requires special design techniques to keep it from getting into the HVAC intakes.
- The manual also covers the design impacts from non-mechanical components of a facility such as the building envelope and roof construction. For instance, snow and ice sliding down of a metal roof can shear off mechanical roof penetrations as well as hoods on the exterior wall below.
- A building envelope must address all modes of heat loss to be truly efficient; ignoring any mode of loss may lead to excessive thermal transfer.
- Frost can be devastating for HVAC equipment, blocking intake hoods, filters, coils, etc.
- Design out cold bridges in both building fabric and engineering penetrations.
- Avoid or minimize any external service pipe runs.
- Locate air inlets and exhausts in locations that avoid snow drift and blockage.
- Ensure condensing pipes never freeze and block.
- Provide safe access to roof mechanical plants in all weathers – frozen roof surfaces can be a hazard.

Frank Mills, who helped write the guide, noted that the book applies to all climates that have a heating season, not just the very cold ones.

“*We do cover the extreme cold climates very well, but we also have very useful information for any buildings which have heating for part of the year,*” he said. “*This covers a lot of climate regions – including Europe where I am.*”

In addition to cold-climate considerations in HVAC calculations and system design, this book's chapters cover sustainability,



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controls, building design, and commissioning, all from this distinctive climatic perspective. The book also includes an appendix with seven case studies of buildings located in cold and extreme cold climates. These buildings are leaders in their field with regard to both efficiency and cold-climate design.

ASHRAE LowDown Showdown Modeling Challenge Highlights Industry's Creativity

ATLANTA – When the smoke cleared and the dust settled at the **ASHRAE “LowDown Showdown,”** organizers declared the overall “winner” to be the building industry, which will reap the benefits of knowledge shared at the event.

ASHRAE's LowDown Showdown was featured at the Society's “**Energy Modeling Conference: Tools for Designing High Performance Buildings,**” held Sept. 30 to Oct. 2, 2015, in **Atlanta, Ga.** Eight teams with 45 people participated in the modeling challenge and presented their models to conference attendees.

“*While it wasn't exactly the Wild West, there were a lot of ideas flying around and impassioned discussion among attendees,*” **Dennis Knight**, Conference chair, said. “*The LowDown Showdown proved to be a big draw and a big success. Hopefully attendees will take the knowledge learned back to their jobs and use it to further the industry in energy modeling.*”

The **LowDown Showdown** complimented the conference's focus on the practical application of high performance building modeling. The Showdown challenged teams to model a net zero or better than net zero building. It gave team members the opportunity to work with the vendor/developer of their choice to

showcase their abilities using the vendor's simulation tools, innovative workflows and creative problem solving to model a high performance building while having fun. The teams participating in the LowDown Showdown were:

- Autodesk
- Carrier HAP
- DesignBuilder
- EnergyPlus
- eQuest
- IES
- Sefaira
- Trane TRACE

"From the very beginning, the Steering Committee's intent when creating the challenge was to encourage participation, demonstrate tools' usage in modeling buildings and have the teams present their models before their peers and colleagues within a 'fair play' environment for the benefit of all participants and vendors," Knight said. "I really want to acknowledge all of the participants for their time and leadership that they devoted to their models – they are all to be commended for their successful projects."

The modeling challenge included four categories for "judging" the models by live polling from the audience and the Steering Committee.

Knight said, *"In retrospect all of the teams could have been recognized but it was decided to recognize the following:*

- *Best Energy Use Results – TEAM IES;*
- *Best Innovative Workflow – Team DesignBuilder;*
- *Best Team Work – Team Trane TRACE; and*
- *Most Creative – Team eQuest."*

Team's models are highlighted at www.ashrae.org/emc2015.

Design Build Sessions Offered by ASHRAE at AHR Expo

ATLANTA – Four sessions focused on design build are being offered for free at the AHR Expo as part of the **ASHRAE 2016 Winter Conference**.

The Conference takes place **Jan. 23-27, Orlando Hilton**, while the **ASHRAE** co-sponsored **AHR Expo** takes place **Jan. 25-27**, next door at

the **Orange County Convention Center**. To register for the ASHRAE Conference, which includes free access to the Expo, visit www.ashrae.org/orlando.

Information about the Expo can be found at www.ahrexpo.com.

The Technical Program features eight tracks, some **100 sessions** and more than **300 speakers**. It runs **Sunday, Jan. 24** through **Wednesday, Jan. 27**, and offers over **200 Professional Development Hours**, as well as Continuing Education Units, which can be applied toward a Professional Engineering license in many states, including the state of Florida.

Four sessions are being offered at no cost at the AHR Expo. The three seminars and one workshop are all part of the Design Build track.

"ASHRAE is always looking for opportunities to improve the Technical Program, and at the same time, to include the theme of the Society president," Jennifer Leach, Conference chair, said. "ASHRAE President David Underwood spent much of his career as a design-build contractor and suggested the Design Build track. Offering these programs at the Expo is a win-win given its close proximity to ASHRAE Conference at the hotel next door. ASHRAE gets an opportunity to reach out to its contractor members and engineers now have another reason to attend the Expo."

The sessions are:

- **Don't Call it a Comeback! The New and Improved Design-Build Survival Guide**, 11 a.m.- noon, Tuesday, Jan. 26. ASHRAE published its "Survival Guide to Design-Build" in 2004. Since that time, the design build delivery method has exploded. In this seminar, speakers provide a first look at the new, improved and updated Design-Build Survival Guide.

- **Avoiding Pesky Pitfalls Integrating Seismic and Sound Control**, 1-2 p.m., Tuesday, Jan. 26. This session addresses the advantage of integrating seismic compliance and sound control early in the design build process. Design of building systems for seismic, wind, sound and vibration control generally occurs later in the project, with the feeling that it is not essential to the design of the HVAC, controls,

electrical or other system. However, when this seemingly non-essential item is overlooked, the cost to meet code compliance and/or owner demands often becomes more than budgeted. Speakers discuss how to avoid these pitfalls.

- **Design-Build for DDC: Yes, It Works! No, It Doesn't! A Healthy Debate by Two Experts**, 2:30-3:30 p.m., Tuesday, Jan. 26. Those who recommend design build for every situation need to be careful. When it comes to direct digital controls (DDC), design build may not be the best solution. Some general contractors claim that the controls subcontractor is no different than the drywall subcontractor, and if a design build delivery method works for one, it should work for all. One speaker in this session feels strongly that a design build scenario is the best solution for today's DDC systems, while the other speaker begs to differ.

- **How Does the Criterion Engineer's Role Affect the Design Build Contractor's and Design Build Engineer's Roles during All Phases of a Design Build Project?**, 3:45-5:15 p.m., Tuesday, Jan. 26. Building owners often retain a criterion engineer to establish the initial design criteria for a project. The engineer creates documents that are handed off to a design build contractor. After this, the role of the engineer can vary. This seminar discusses issues that can arise as the owner and design build contractor interpret the bridging documents and how open or closed a line of communication is with the engineer during all phases of a design build project.

Job Posting 2015

Job Posting 2015-004: Senior Electrical Engineer - OTTAWA

Job ID:	2015-004	# of Positions:	1
Location:	Ottawa, Ontario	Experience (years):	Minimum 10
Posted Date:	October 8, 2015	Status:	Permanent full-time
Job Title:	Senior Electrical Engineer	Category:	Electrical

Overview

Jp2g Consultants Inc. is a multi-discipline **Consulting Engineering** firm providing services in municipal infrastructure and building services. Our firm currently requires a qualified Senior Electrical Engineer in our Ottawa Office. Jp2g provides opportunities for work on a wide variety of projects, with emphasis on educational, federal, commercial, and institutional clients. Focus of electrical work includes; building lighting, power distribution, fire alarm, telephone and data, energy management, and engineering investigations and reports.

Responsibilities

- Plans, implements and leads electrical design to determine resource requirements, staff allocation, project timelines and budgetary requirements.
- Routinely checks and reviews electrical engineering documents for technical conformance. Performs fundamental electrical engineering calculations to determine systems configurations and capacity.
- Oversees workloads and provides staff supervision to ensure that work is done accurately, efficiently, and complies with policies, procedures and standards as well as best working practices. Advises on technical problems and reviews work assigned to staff for technical accuracy.
- Builds and maintains positive relationships with colleagues, other consultants, and key stakeholders to ensure projects run smoothly and to resolve concerns promptly and efficiently.
- Maintains existing business and develops new business opportunities
- Prepares project fee proposals.
- Provides guidance to engineering staff members on more difficult problems and methods of approach.
- Researches and sources new systems and resources, analyzes processes, procedures and working practices to identify and implement changes to increase efficiency, productivity and overall profitability.
- Maintains familiarity with current techniques and developments to sustain and improve technical skills.
- Attends meetings, as necessary, and liaises with various stakeholders to deliver presentations, coordinate resources, determine project criteria and provide information as requested.

Qualifications

- Bachelor's Degree in Electrical Engineering.
- Minimum 10 years of experience in the field of electrical building services – lighting, power distribution, fire alarm, telephone, data and security.
- Professional Engineer, Licenced in the Province of Ontario.
- Strong ability to work in a complex environment, dealing with multiple projects and clients.
- Sound communications skills (oral and written) as demonstrated through client and staff relations.
- Demonstrate experience working with other consultants and contractors, and coordination of major projects.
- Knowledge of OBC, NBC, IEEE, IES, ASHRAE, CSA and NFPA standards.
- Familiarity with software (such as Visual lighting) and NMS specifications.
- Strong sense of urgency and ability to prioritize tasks.
- Excellent problem solving and decision-making skills.
- Working knowledge of MS Office
- Basic CADD experience.
- LEED certification / Experience implementing sustainable design (LEED projects) is considered an asset.
- Experience in project management is considered an asset.

Compensation and Benefits

- Competitive compensation package commensurate with experience and based on industry standards
- Friday afternoon's off year-round (36 hour/week)
- Group RSP planning opportunities
- Group benefits plan
- Professional development and advancement opportunities
- Shareholder opportunities
- An Equal Opportunity Employer

Please submit hard copy resumes in confidence to:

David Nguyen, P.Eng, ing,
Ottawa Office Manager
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1150 Morrison Drive, Suite 410
Ottawa, Ontario, K2H 8S9

Or Email to Ottawa@jp2g.com

We thank all applicants for their interest, however only candidates selected for an interview will be contacted.



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Advertising

Advertising career opportunities on the **ASHRAE Ottawa Valley** website makes good business sense. We offer a unique way to reach technical professionals and make your ad dollars work hard for you.

To discuss your needs, contact one of our chapter officers, via our "This Year" page. Increase the impact of your advertising through the **ASHRAE** Ottawa Valley website today.

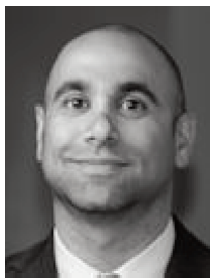
Rates for career opportunities ads are as follows:
Chapter Member: \$50/month
Non-member: \$250/month

Placement of an Ad

We suggest that you complete and submit our advertisement form to speed up the processing of your request. If you have provided your e-mail address, a confirmation receipt e-mail will be sent to you for reference.

Please note that ads require prepayment made to the treasurer. Please register and pay online or for payment and other information contact **Adam Graham** at Adam.Graham@hts.com

The ads will appear on the website until the end date for publication provided in the submitted form. To extend the ad, please resubmit the form with the new publication dates and the required prepayment amounts.



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2015-2016

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Business Card Ads

You can support your chapter and promote your business by placing your business card in the Capital Communiqué. It will also appear on the chapter website.

The cost is \$250.00 for the year. Please contact **Rod Lancefield** at rod@htseng.com for more details.



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2015-2016 Publicity

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