



SEABC NEWSLETTER

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August 2012

- SEABC's Newsletter is both edited and managed by The Communications Committee. newsletter@seabc.ca
- Submissions to the newsletter are encouraged and all members of the SEABC are asked to actively participate in contributing to our newsletter. Submissions letters to the Editor, questions and comments can be sent to: newsletter@seabc.ca
- SEABC editing staff reserve the right to include or exclude submitted material and in some cases edit submitted material to suit overall space requirements. If submittals are not to be edited, please advise editor at submission time.

Message from the President

August 2012

By Cameron Kemp, P.Eng.;
SEABC President



As this newsletter reaches you in the final weeks of summer I hope you have had a good one and have found the time to take a break and relax. If not, do it now before the good weather has gone and the pace picks up again in September!

While you've been enjoying the summer the SEABC Board has continued work on developing a busy fall and winter program.

Our Education Committee is organizing a full slate of courses, presentations and events that will begin in the fall and carry through into 2013. Some of these presentations include a discussion about wood moment-frame connections, cross-laminated timber design, a review of the 2011 Japan earthquake and tsunami effects and reconstruction one year later, a presentation about the new Port Mann Bridge and a multi-day seminar on structural design and related computer applications. Two of our Board members attended the recent SEA Northwest conference in Idaho in late July.

We are already starting to plan our 2013 AGM and are looking into keynote speakers of the caliber of Mr. Bill Baker of SOM who spoke at our 2012 AGM about the design and construction of the Burj Khalifa in Dubai. After the summer break I would encourage you to continue to upgrade your skills and get more involved in our profession through a number of available options:

- Take one of our technical or professional development courses. There is a wide variety of courses and seminars being offered that should appeal to just about everyone.
- Join one of our technical or business oriented committees. These committees are always looking for volunteers and are working on a number of very interesting assignments.

- If you are early in your career consider joining our Young Members Group. This is a very enthusiastic group with lots of interesting initiatives on the go.

You can find information about each of these options elsewhere in the newsletter and on our website. I encourage you to get involved as I know you will find it rewarding and it will aid in strengthening our profession.

In the meantime get back out there and enjoy the remainder of the summer and we look forward to seeing you again in the fall.

Bridge Subcommittee Update

By Alfred Kao, P.Eng. Associated
Engineering (B.C.) Ltd.



The inaugural session of the SEABC Bridge Courses has now finished. Interest and participation in the first course has been strong and feedback has been positive. In the fall SEABC will offer two more bridge related courses (C50 Highway Bridge Loading and E16 Introduction to Cables and Cable Systems) see:-

www.seabc.ca/current.html.

A committee meeting will be held in early September to plan for the winter and spring sessions. If you're interested in participating on the committee to assist with planning, preparation and delivery of courses or would like more information on the committee's activities, please contact Alfred Kao at:-

kaoa@ae.ca.

IStructE News

By Bill Alcock, P.Eng. Struct.Eng.
MIStructE. Director SEABC

Highlights of the IStructE Council Meeting, July
19 & 20, 2012



As the SEABC representative on the IStructE Council, I am privileged to report on the Institution's recent Council meeting which took place in Edinburgh, Scotland.

1. Updating the IStructE Exam

Considerable discussion took place amongst the international group on updating the IStructE Chartered Membership exam, noting that within the next 5 years, 50% or more candidates will be from outside the UK. Some of the suggestions included:

- Re-thinking the whole exam to set a worldwide standard for structural engineers.
- Providing two-hour additional specialist exams (i.e. on seismic design, bridges, etc.) or include the specialization as part of the exam.
- Providing the exam in multiple languages.
- Allowing the drafting section to be done electronically (i.e. on AutoCAD).
- Maintaining code-neutrality.
- Ensuring that there are financial options for third world candidates as the exam is expensive. (It was noted that, up to a 60% discount is currently available, but few candidates know about this.)
- Considering part of the exam to be devoted to improved embedded carbon in structural materials.
- Promoting post-disaster design in the light of recent increased natural hazards.
- Improving feedback for those who fail.
- Allowing language neutrality: Chinese candidates, for instance, do well on the

written exam but poorly on the interview because of the language barrier.

- Allowing candidates to write the exam who have a Master's degree but no Bachelor's. This is becoming quite commonplace.

2. Global Earthquake Model (GEM)

Tony Gibbs reported on the Institute's participation in the GEM, a growing international organization playing an active role in developing worldwide standards for earthquake engineering and response.

3. The Purpose of Regional Groups:

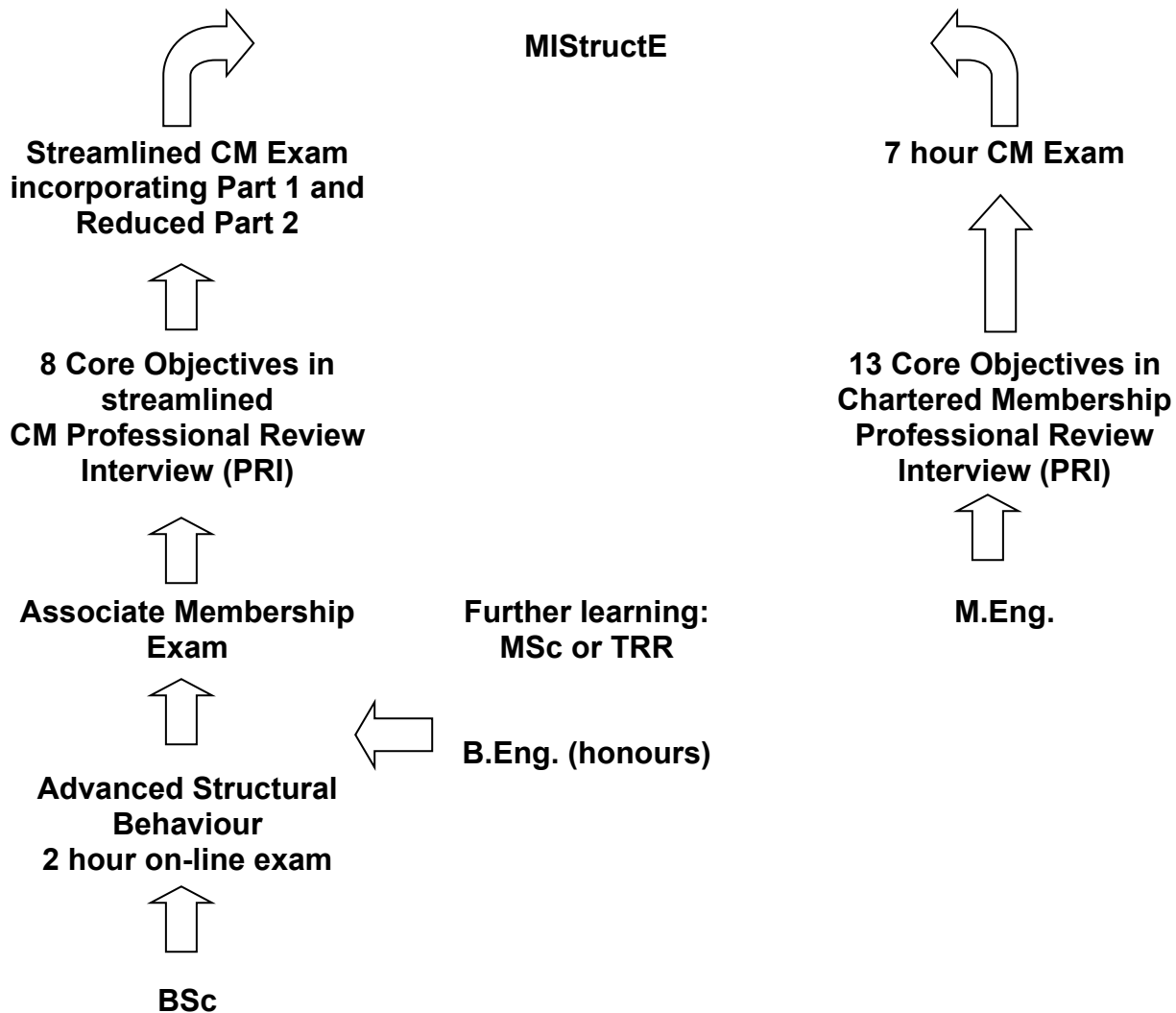
The role and purpose of having regional group involvement in IStructE (such as the SEABC) was examined. Keeping the Institution "family-friendly", and UK members included as the Institution becomes more international were also concerns.

Two primary purposes of the regional groups were identified: support of membership and outward facing promotion of the Institution. Ideas for improving these roles included:

1. Support of membership
 - a. Provide an electronic library
 - b. Provide a website linked to calendar
 - c. Use Facebook to improve communications
2. Outward-facing promotion of the IStructE:
 - a. Develop a "PR" officer in each group
 - b. "Think Up" –bridge building or other student projects
 - c. Create brochures for promotion of IStructE and engineering in general in schools
(Note: "Out-of-the box" promotional material will soon be heading our way.)

Lastly, a proposed alternate route to IStructE Membership was presented by the Board, as summarized in the following flowchart:

PROPOSED ALTERNATE ROUTES TO ISTRUCTE MEMBERSHIP





*Bill enjoying his first visit to Scotland:
at Holyrood Palace and on Salisbury Crags, Edinburgh.*

Young Members Group

By Ilana Danzig, EIT, LEED® AP, Director SEABC



The Young Members Group has had an enjoyable few months. On June 20th we hosted a social evening at Revs Bowling for members young and old. Twelve engineers vied for bowling supremacy. Despite a poor first and last game, the high score of the night went to Kate Thibert who managed to eke out a Turkey and bowl 137! All who attended had a great time. The YMG is looking forward to hosting similar events in the future so please watch out for announcements.

On July 24th thirteen SEABC members joined the tour of Port Mann Bridge organized by the Canadian Society of Civil Engineers (CSCE) Vancouver Section. Lead by Daryl Schubert, Project Engineer from Kiewit-Flatiron, the group marched on from the North approach towards the North Pylon.

During the tour the group observed the 155 metre long gantry, expansion joints resting at the North end of the bridge. The highlight of the tour was the breathtaking view of the Lower Mainland from 160 metres above the sea level on top of the North Pylon. A big thank-you to the CSCE for opening this tour up to SEABC members!



The breathtaking view from the top of the North Pylon



Young members enjoying the tour of the Port Mann Bridge





The forest of cable stays from the mono-pylons

We have some great upcoming events that you should watch out for, including our second annual fall excursion to the Hasting Racetracks, and a technical seminar in November that will cover field reviews.

Do not hesitate to email us if you have any questions, comments, or tour suggestions. If you are interested in being a YMG company representative for your company, please email us at:-

ymg@seabc.ca.

The time commitment required is minimal and you will be a valuable resource to help us with planning and executing events!

Finally, I'd like to extend a huge thank you to the entire YMG committee. They are a dedicated group of volunteers who do some amazing work organizing these great events. I also want to welcome Nazli Azimikor to the committee, and congratulate Stanley Chan on graduating from "student rep" to committee member!

Communications Committee

**By David Harvey, P.Eng, Struct.Eng.
Director SEABC**



The Communications Committee is looking to expand its message to our members. Most of you will be familiar with our website and our newsletter content. The feedback we receive is that you are generally satisfied with the information we provide. However, your Communications Committee would like to go one step further.

Most of us are very interested in what is going on in the structural engineering world. We always seek to find out information on interesting projects or research work that is currently underway or has recently been completed. There is much to learn from the information that often only the structural engineer responsible can provide. The information can include project descriptions; lessons learned; successful and unsuccessful details; unusual design features; innovations and findings from research and testing.

As a result the committee is looking to publish information from structural engineers on their current activities. To do this in a meaningful way, we need you to send us information on what interests you as a structural engineer. All we need is a brief description of the project and interesting aspects; the participants; and illustrative photographs, diagrams or figures. Good photographs are particularly important in illustrating your work.

Please do not be shy – let your fellow structural engineers know what you are up to. It is a good way to raise your profile in the structural community and can always lead to future opportunities. So why not give it a try – we look forward to hearing from you.

Please forward information for publication to:-

newsletter@seabc.ca

– We'll do our best to include your article and are happy to edit it on your behalf. Thank you!

Corporate Committee

By David Harvey, P.Eng, Struct.Eng.

A reminder that the Corporate Committee offers breakfast meetings which cover non-technical areas of particular interest to our corporate members. Past topics have included Generation Y Employees, and Insurance, and have proven to be very popular.

In May 2012, SEABC hosted two training workshops organized by Asia Pacific Gateway Skills Table, which were sponsored by Human Resources and Skills Development Canada. Held at the Terminal City Club, the workshops were entitled 'Creating a Blueprint for Supervisory Skill Development'. The presenter was Wilma Marais, a Vancouver-based Human Resource Consultant. Wilma is experienced in holding training sessions for engineering consultants in the Lower Mainland and other local employers.

The workshop introduced the APGST training guide, a comprehensive document aimed at supervisors but relevant to everyone. The members and guests participating in the workshop sessions found the information to be very useful. We still have some training documents left over so please contact SEABC if you are interested.

APGST is producing more personal and career development training material in the area of supervisory skill development. SEABC may be hosting further training sessions – so let us know if this opportunity is of interest to you or your colleagues, watch this space for announcements, and please attend our future events.

APGST's mission is to ensure that the Asia Pacific Gateway has enough people with the right skills and training to meet its needs. Its goals are:

- To provide relevant and unique labour market information.
- To serve as a clearinghouse between industry sectors for labour market information, project information, common issues and best practices, successful strategies and solutions.

- To assist industries to promote the APG as a place to work.
- To research and provide awareness of the future of work in the APG.
- To assist industry sectors to address skills gaps.

More information on APGST is available at:-

www.apgst.ca

Evening Seminar: Changes in Part 4 and 9 of the 2012 BCBC (2010 NBCC)

By Farshid Borjian P.Eng, Struct.Eng.



On April 25th, an estimated audience of 110 people attended the SEABC evening seminar "Changes in Part 4 and Part 9 of the 2012 BCBC (2010 NBCC)" at UBC Robson Square.

The speakers were Grant Newfield, a principal with RJC, and Steven Kuan with the BC Building and Safety Standards Branch.

Grant Newfield spoke about the changes in Part 4. A copy of his presentation can be found at :-

www.nationalcodes.nrc

The following are code changes which were mentioned in the presentation:

- New load due to crane "C" and new load combination Table 4.1.3.2.B including crane loads

- Changes in live load of grandstands, arenas and stadia with fixed seats,
- New definitions for vehicle classes
- Changes in concentrated load contact areas related to wheel contact area
- Climatic and seismic data in Appendix C, Table C-2 now updated
- Type 4 irregularity, in-plane discontinuity in vertical lateral force resisting elements exception for braced and moment-resisting frames
- Introducing R_d , R_o for new systems like as ductile buckling-restrained braced frames
- Long-period cut off for acceleration spectrum
- Changes in wind exposure factor " C_e " for sites near open terrain.

Steven Kuan talked about standard design requirements in Part 9. He explained that there are three methods to be used: Part 4; good engineering practice – e.g. Canadian Wood Council Guide; and Part 9.

There are three wind and seismic load categories:

- Extreme category where $q_{1/50} \geq 1.2$, $S_a(0.2) \geq 1.2$:
 - the requirements of Part 4 or accepted practice should be used.
- High category where $0.8 \leq q_{1/50} < 1.2$, $0.7 < S_a(0.2) \leq 1.2$:
 - the requirements in Clause 9.23.13 should be used.
- Low categories where $q_{1/50} < 0.8$, $S_a(0.2) \leq 0.7$
 - no change to NBCC 2005.

Braced wall panels and braced wall bands were discussed in detail. The presentation was followed by plenty of helpful questions and comments from practitioners who face these issues as part of their daily work.

A copy of Steven Kuan's presentation can be found at:

www.nationalcodes.nrc

This seminar also was repeated in Victoria on May 16, with about 30 attendees; and in Kelowna on June 19, with about 20 attendees.



Presenters Grant Newfield, and Steven Kuan

NWSEA Conference

By David Davey, P.Eng. Struct.Eng. Past President



The annual meeting of delegates to the North West Conference of Structural Engineers Associations (NWCSEA), hosted this year by the Oregon Structural Engineers Association (SEAO), took place at the Kah-Nee-Ta resort, Warm Springs, Oregon, on July 26 -28th. The

NWCSEA members include Oregon, Washington, Idaho, and British Columbia; Montana is now seeking to join the North West Conference and to host the event in 2014.

The high desert region of Central Oregon is a perfect spot for a family vacation and many conference delegates took full advantage of the opportunity while earning valuable professional development credits. The conference included access to some first class social activities including the aquatic facilities, the resort's championship golf course, and a conference feature – the evening Salmon Bake and Native Dance.

Approximately 60 delegates and exhibitors attended the conference, including three delegates and their families from BC. The SEABC representatives were Past President David Davey, Director, David Harvey

and keynote speaker, Dr. Ken Elwood whose dramatic and compelling updated presentation on the Christchurch earthquake was the highlight of the conference.

At each of the annual NWSEA conferences, the first event is a meeting of the NWSEA Council, which is made up of representatives from each of the participating SEAs. Discussion revolves around common interests and concerns. Although our US cousins operate under a different licensing system and use different Codes and Standards, we share many interests. It was encouraging to note that US structural firms in the Pacific North West have noticed significant business improvement since 2009/10. In addition, they have encountered heightened awareness of the risk of a subduction earthquake; are becoming active in registering and certifying volunteers for disaster response; and have concerns over a perceived drop in the quality of university-educated engineering graduates.

One current NWSEA project is to improve coordination of snow load maps to ensure continuity of snow load contours across state boundaries. Establishing reciprocity procedures for exchanging technical information, including archived technical seminars, remains a work in progress.

The technical program of the conference provided information on a varied and interesting range of topics, including problems of establishing a school retrofit program in Idaho; designing retaining walls subject to seismic loading; unified approach to the design of buckling-restrained bracing; and changes and use of various US Standards. The latter topic would be useful for engineers practising or wishing to practise south of the border.

Of the over 2000 SEA members in the Pacific North West, almost one third are SEABC members. We, therefore, represent a significant proportion of structural engineers in our geographic region and we should be taking a more active role in the work of the NWSEA.

Next year, 2013, the NWSEA holds its four year "Round-Up" conference in combination with other western states including Alaska and Hawaii. The "Round-Up" will be held in Hawaii and will probably be held in a resort location suitable for engineers to attend

with their families. I challenge all to attend, earn PD hours and make it a conference to be remembered!



Anne and Dave Davey with a Native Dancer



SEAW representative Ed Huston with SEABC representative David Harvey at the Salmon Bake.

Masonry Design Awards

By Bill McEwen

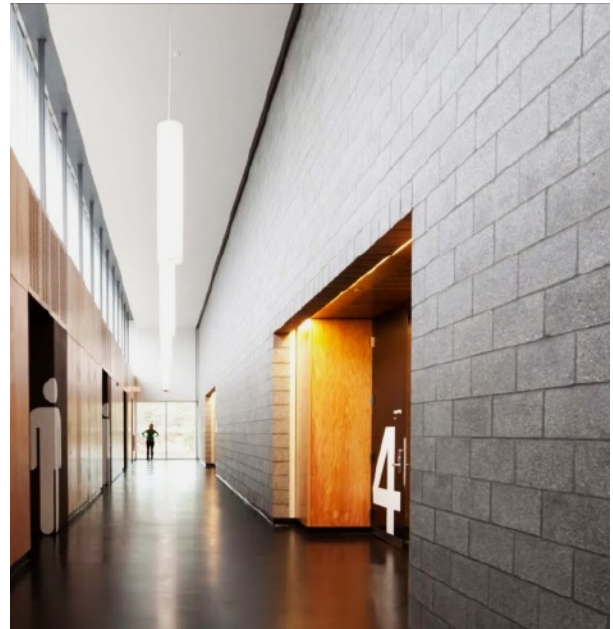
The Masonry Institute of BC announced the winners of the 2012 Masonry Design Awards on May 17th at an awards gala held at the “Roundhouse Community Centre” – a heritage brick building built in 1888. The awards are held every three years to showcase and recognize design excellence in B.C. projects featuring block, brick and stone.

Eighteen winning projects were chosen in eight categories from a total of fifty submissions. The projects were evaluated by a jury panel consisting of John Davidson of DYS Architecture, Greg Johnson from the UBC School of Architecture, and Peter Zirpke, a retired masonry contractor. Five other People's Choice awards were also presented based on balloting at the event. Keynote speaker architect Paul received a special recognition award.

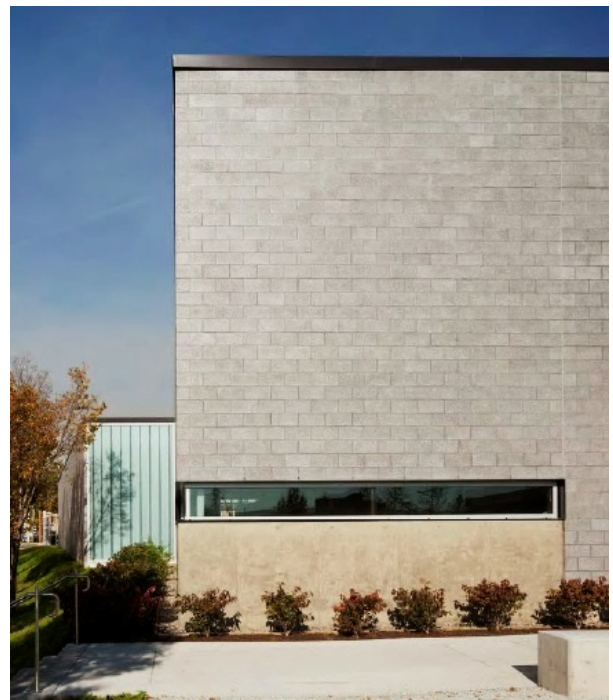
There were four winning projects in the Structural Masonry category:

- Equilibrium Consulting: Two Technical Trade Centres for the College of New Caledonia, one in Prince George, the other in Quesnel
- JKK Consulting Engineers: UBC Centre for Comparative Medicine
- Equilibrium Consulting: Ecole au Coeur-de-l'Ile in Comox

The first three projects featured ground face concrete block for both exposed interior structural walls, and for exterior veneer claddings. For all of the projects, the block structure provided a winning combination of structural efficiency, short construction time, good appearance, low maintenance and minimum life-cycle cost. Guest, Andrew Seeton, presented awards.



Ground Face interior structural block at CNC Technical Trade Centre.



Ground Face exterior block at CNC Technical Trade Centre.



Professional Practice Committee

By Leonard Planalto, P.Eng, Director
SEABC



The Professional Practice Committee continues to work with APEGBC to maintain a healthy level of communication between the SEABC and our regulatory body.

In keeping with our goals set out last year we have completed the Earthquake Fact Sheet and should be available for distribution to general public shortly through a variety of channels including the SEABC and APEGBC websites.

The Guard Design Guide has been completed and it is now being reviewed by APEGBC for acceptance by council. This will include a legal review and some minor changes are expected. Nonetheless, we expect the Guide to be published later this year.

Our committee has recently grown in numbers and we welcome the following new members: Peter Kiddie, Scott Loptson, Sukh Johal, David Peng, Dorian Tung and Lee Rowley. Bill Alcock and David Harvey also continue to provide valuable contributions to the committee.

Our goals for this coming year include addressing the following key initiatives:

1. Review APEGBC guidelines on the Use of Seal particularly with respect to how this applies to application of the seal on tender documents.
2. APEGBC Guidelines on Structural Engineering on single family residences – there are two documents that APEGBC publishes. Due to recent code changes these guidelines have become antiquated and APEGBC has asked that SEABC review and revise as necessary.
3. Renovation triggers for structural upgrading – This is an issue that was brought forward to the SEABC last year. We are currently collecting the various guidelines and documents that are published by the authorities having jurisdiction in an effort to understand the current state of practice in this area. We hope to develop some means of establishing a consistent level of practice in the near future.
4. ATC20 Post Disaster Evaluator Roster – This is an ongoing initiative that SEABC and APEGBC are currently working on.

Sustainability Design Education

By Damien Stoneham, P.Eng C.Eng LEED® AP BD+C CSBA and Mark Porter, P.Eng., Struct.Eng. LEED® AP



SEABC has been working with a task force to answer a demand for a practical course on how Structural Engineers can contribute to sustainable design. We are working on the formation of a new course entitled 'Sustainable Design for Structural Engineers' as part of the Certificate in Structural Engineering Program. A group of experienced industry individuals has been tasked with preparing the course content and ensuring its delivery for early 2013. Topics will include: Sustainable Design Fundamentals; Knowing Your Materials; Building Adaptability &



Durability; Energy – Embodied & Operational; Embodied Energy Calculators; Design Efficiency; Re-Use & Recycling; Sustainable Construction Practices; Specifications; What Architects Want; Rating Systems; Integrated Design approach; Life Cycle Analysis.

Guest speakers with first-hand knowledge in each of these topics will present tried and tested methodologies as well as the latest trends in sustainable design.

Structural engineers have long been considered the 'silent' members of the design team when 'sustainable design' was being discussed. That is now changing as more and more focus is being placed on the embodied energy that make up our buildings/structures. The SEABC is excited about the opportunity of introducing this course at a time when structural engineers are being expected to 'contribute'. We are confident that this course will give them the voice.

Education Committee

By Cam Smith, Director SEABC



The SEABC Education Committee is currently on summer break and therefore the following is an abbreviated version of the regular update. The Education Committee will be continuing preparations for the following upcoming seminars/events when we reconvene in September: "Wood Frame Moment Connections", "The Port Mann Bridge Project" and the annual Wine & Cheese Event. Note that the Wine & Cheese will be held this year at BCIT's Burnaby campus and is scheduled for September 19th at 6:00 pm – additional details will be provided shortly.

As mentioned in the previous newsletter, for those who are interested in taking the BC Codes and Practices Exam, a seminar is currently being planned for October 2012. Although this will be an APEGBC organized event, the SEABC is assisting with course content and program structure, as well as identifying potential speakers. More information will be provided as it becomes available; information on the BC Codes and Practices Exam can be found on the APEGBC website:-

www.apeg.bc.ca

As a reminder to the SEABC membership, video recording and archiving of seminars and events continues to be done to better serve the SEABC Membership who are unable to attend in person. This service is available through the SEABC website (via *Member Login*, under the *Seminar Downloads* link) where presentation literature from previous seminars is also made available. We appreciate feedback from members including comments on past events, suggestions for future topics, and proposals for presentations, so please do not hesitate to contact us at:-

education@seabc.ca.

On the Web

By Stephen Pienaar, P.Eng; Director SEABC



Instead of the usual report back on SEABC's online services, I would like to pause and reminisce about social networking. More specific, I want to share a few thoughts on Twitter and why I think it matters in our busy professional lives.

SEABC established a Twitter presence a year and a half ago. In the beginning we found it useful for announcing SEABC events. More recently, the Young Members Group got involved and helped expand it into something much bigger: a news stream with interesting snippets on structural engineering. Today we have seventy-something subscribers. This represents about 10% of our membership, suggesting that many members are probably still shying away from using Twitter.

What is Twitter?

Twitter allows one to post short messages (called tweets) of up to 140 characters (similar to text messages on cellphones). The real usefulness of Twitter lies with the ability to follow (subscribe to) other users and see their messages. There is much more to Twitter than just this, but I will not get into all of that here.

The Twitter service takes its name from the sound that birds make. Birds tweet and the collection of all their sounds is twitter. Flocks of birds follow each other, and likewise people follow others on Twitter. Just a tip: to avoid seeming ignorant, remember that the act of posting a message on Twitter is to "tweet", not to "twitter"!

Some individuals and businesses use Twitter to post short announcements, others comment on issues of the day, and others use it for correspondence with friends. And others, like me, keep a relatively low profile and mostly just consume the information posted. To me, Twitter has become a bona fide news source.

How to get started with Twitter?

Even if social networking is not your thing, I still recommend you give Twitter a try. I suggest you start as follows:

- Go to www.twitter.com and sign up. Along the way you will choose your Twitter name. Our Twitter name is (you guessed it!) SEABC, and our Twitter page is at www.twitter.com/seabc.
- Once you have signed up and are logged in, search for something like "SEABC", "earthquake updates" or "golf tips".
- When you find a Twitter user with interesting tweets, use the "Follow" function to subscribe to that user. Back on your Twitter Home page, you will automatically see tweets from everyone that you follow. (Likewise, your followers will see all your tweets.)
- If you want, you can set to receive tweets from certain users as text messages on your cellphone. This works really well if you want to be alerted of something you consider to be important. (You can configure Twitter to not disturb you with text messages at night.)

Start by following a couple of Twitter users. Soon you will find that Twitter becomes part of your morning coffee routine: check a regular news site and then scan Twitter for other interesting snippets. But be careful: before long you will risk sending your first tweet...and a few more... and then someone starts following you... and then you are hooked!



I hope to see you on Twitter soon!

Ask Dr. Sylvie

CISC published Ask Dr. Sylvie articles in Advantage Steel up until Edition 34 available at: www.cisc-icca.ca/content/publications/publications.aspx

See also the list of CISC technical resources at: www.cisc-icca.ca/content/technical/default.aspx

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Mark Your Calendars



Workshops

NEW Sustainable Structures: Where are we heading?

This half day workshop will provide designers with the tools, ideas, and strategies to design sustainable structures. We will engage and inspire your business to integrate sustainable concepts into your designs. With knowledge, case studies and interactive group discussion you will be able to develop a strong understanding of the role structure can play in sustainability.

September 14, 2012 - Vancouver, BC. www.apeg.bc.ca/

November 2, 2012 - Victoria, BC. www.apeg.bc.ca

Certificate in Structural Engineering Program Courses

- C4-2 Advanced Concepts in Earthquake Engineering and Seismicity
- C13 Structural Steel Design
- C50 Highway Bridge Loading NEW COURSE
- E16 Introduction to Cables and Cable Systems

The September 2012 Term will run from September 11 to December 6. For dates and times of individual courses, please see the [SEABC website](http://www.seabc.ca). Classroom sessions will be held in the Alma Van Dusen Room of the Vancouver Public Library, 350 West Georgia, Vancouver. Courses will also be available via live webcast.

Webinars

August 21

NCSEA Webinar: Aluminum Mechanical & Welded Connections Design

(Online) - [More information...](#)

September 13

NCSEA Webinar: Design of Environmental Concrete Structures with ACI-350

(Online) - [More information...](#)

October 3 - 6

NCSEA 20th Annual Conference

St. Louis, MO (USA)

October 3

NCSEA Board Meeting

St. Louis, MO (USA)

October 4

CFSEI Webinar: Cold Form Steel Bracing

(Online) - [More information...](#)

October 11

NCSEA Webinar: Tools for Structural Assessment - Part I

(Online) - [More information...](#)

Conferences

August 19 - 22

CSCE-ASCE Cold Regions Conference

Quebec City, PQ (Canada)

October 21 - 25

ACI Fall Convention

Toronto, ON (Canada)

October 24 - 26

ATC & SEI Advances in Hurricane Engineering Conference

Miami, FL (USA) - [More information...](#)