



EQUILIBRIUM

Newsletter of the Seattle Chapter
Structural Engineers Association of Washington

December 2012

President:
Cale Ash

Vice President:
Peter Somers

Treasurer:
Theodore E. Smith

Secretary:
Michael Bramhall

Past President:
Howard Burton

Directors 2010-2013:
Brian Pavlovec
Michael Wright

Directors 2011-2014:
Tom Corcoran
Steve Dill

Directors 2012-2015:
Karen Damianick
Steven Pfeiffer

YMF President:
Jennifer Ahlport

Executive Director:
M. Lynnell Brunswig

VISIT OUR WEBSITE:
www.seaw.org

From the Board: Planning for the New Year

-By Steve Pfeiffer



Well it is December already. Wow, how time flies! We certainly had a glorious summer, and now, seemingly in the blink of an eye, we have moved on to winter. Perhaps it is time to think about accomplishments for the year and to mull over plans for the coming year. Something you might want to consider is increased participation in

SEAW. SEAW is a great organization and just like a fine wine gets better every year. Of course what makes it a great organization is its membership. We have many outstanding contributors to the organization, many of whom have been contributing for a long, long time. Perhaps it is time to get new people involved...maybe you?

There are numerous reasons for SEAW to seek out new members just as there are many benefits for those who join SEAW. One reason why it is important for SEAW to seek out new members is succession planning. A significant number of SEAW members are also members of the baby boom generation and they are not getting any younger. Although I suppose neither are you. Another reason and a benefit of joining, and I would like to focus on this one a while, is that we have a lot of expert engineers involved in SEAW and that includes many who are nationally recognized for their expertise. While that is fabulous, I would like to think small here, as in the little daily grind issues. All practicing engineers run into these issues and they are important for the projects they are working on, and yet often these issues get ignored. Joining and participating in SEAW is a way of getting these issues looked at and perhaps resolved.

From my view at the City of Seattle, I get to see a lot of projects, big, small and in between, and it is frequently these small projects that have these interesting and thorny issues that often don't rise to the attention of the various SEAW committees that could be looking at them. This is something I would like to see change. I have to believe some of the small firms in particular have to deal with these questions and yet may not have the resources that a larger firm has. How do you get the answer to your questions? I am sure many of you struggle through and make fine decisions, but why not have it vetted by one of our SEAW committees? How do we make that happen? Well, of course the answer is you, our members, and perhaps some of your friends, who are not members, who might want to join. It would be good to have more of these issues brought for-

ward and perhaps while at it, join a committee. It's a great opportunity, not only to get your questions answered but to hear what other issues are out there and what the answers to those issues are. You might be surprised at just how many there are and what the answers might be. How about those discontinuous shear walls in small wood-frame buildings, power-actuated fasteners in a high seismic zone, discontinuous diaphragms in townhouse structures, Appendix D, and that wonderful Kzt factor, just to name a few. I know these issues have come up and that answers are not all clear, so some good discussions on these might be very beneficial. Even if it turns out there is not a right answer to a particular question it is good to at least know what others are thinking and that your answer is not deemed wrong, or if it is, you have learned something and can move forward doing a better design.

Back to succession planning; involvement now gives new members an opportunity to sit in and see how things work within SEAW, how the sausage is made, and then when the time comes to recruit new leaders, it becomes more of an easy transition when taking over the reins of a committee or perhaps even being on the Board of Directors. Heck you might even get a chance to voice your opinion in the newsletter!

Hopefully everyone is taking the time to enjoy the holidays and as you do, keep in mind opportunities abound for the new year, including productive and beneficial participation in SEAW. Something to think about. Giving, contributing, and learning, are all good things. Getting more involved with SEAW is a good way to do all three, so why not give it a shot?

Enjoy the holidays! And remember there are many ways to contribute (Some of you can bring answers and some of you can bring questions, and both are good!) Those of you with a lot of experience may want to start sharing that vast pool of knowledge you have, those with less experience and hungry for knowledge may want to join some of our committees so that you can learn from the pros. The organization needs both!

Steve Pfeiffer is an Engineering and Technical Codes Manager for the Department of Planning and Development at the City of Seattle. A 2012-2015 Seattle Chapter Director, Steve has been a member of SEAW since 1996.



**Happy Holidays
to you and yours
from SEAW!**

In this issue

| | |
|---|----------|
| From the Board | 1 |
| Nov. Meeting Recap | 2 |
| January Meeting | |
| Announcement | 2 |
| Prof. Practices Committee | 3 |
| YMF Corner | 4 |
| Committee Corner | 6 |
| Meetings, Seminars and Announcements | 8 |
| Employment | 9 |
| Calendar, Membership | 11 |

November Meeting Recap

A Celebration of the Seattle World's Fair Engineers

-by Peter Somers

Our November dinner meeting was a special event at the Skyline room in the Space Needle. The space offered the meeting attendees excellent views of the iconic structures of the World's Fair as well as a chance to mingle with some of the engineers responsible for those designs. The presentation started off with a screening of a trailer for the forthcoming documentary covering the work and experiences of many of the structural engineers who contributed to the design of the World's Fair structures. The full documentary is in post-production now and will be unveiled next spring.

Moderator Tyler Sprague, Acting Assistant Professor in the UW Department of Architecture, introduced the film trailer and then introduced the evening's three panelists: Gary Curtis, Norm Jacobson, and Bob Mast.

Gary Curtis, who worked on the Space Needle foundations and superstructure while with the structural engineering firm of John Minasian, brought with him a set of the original structural drawings. As well as presenting some of the structural aspects of the design, including massive concrete foundations and the wind load design, he also talked about the challenging schedule for the project. At times he was detailing only about 100 feet above the construction progress on the structural frame. He shared an anecdote about his manager attending meetings with the architect during the day, flying back to the office in Los Angeles that evening, having the engineers update the structural drawings that night, and then messengering them back to the architect for next morning delivery.

Bob Mast, with the firm Anderson, Birkerland, and Anderson (later Berger-ABAM), was responsible for the precast concrete beams for the monorail structure. This was the first use of curved prestressed beams, and so the design reflected significant engineering judgment, in particular with how to accommodate torsion, which was much less understood in concrete beams at the time. As a result, the beams are packed

with transverse reinforcement. Almost every beam was a unique shape, consisting of straight sections, curved sections, spiral sections, and combinations of these shapes. Monorail riders may notice some up and down movement on the rail—this results from cambering the beams for the maxi-



World's Fair Engineers (from left) Gary Curtis, Bob Mast, and Norm Jacobson, field questions.



Gary Curtis shares Space Needle plan details.

with transverse reinforcement. Almost every beam was a unique shape, consisting of straight sections, curved sections, spiral sections, and combinations of these shapes. Monorail riders may notice some up and down movement on the rail—this results from cambering the beams for the maxi-

imum possible loads rather than the service conditions, a practice that was not continued. Despite being way out in front of the state of the art for prestressed, precast beams and being designed as a temporary structure, the monorail is still functioning well after 50 years.

Norm, shortly after founding his own firm, designed the Mercer Street parking garage and provided the precast design for the Pacific Science Center. The parking garage was the largest precast project in the region. The architectural and structural design was very integrated including designing the garage slopes and transitions to allow cars, then without parking brakes, to park on the ramps without a risk of rolling downhill. Built for \$3.07 per square foot in the early 1960s, the garage remains an example of very efficient precast construction.

The panelists took various technical and non-technical questions for the audience, and the presentation closed with their advice for young engineers. Mr. Curtis encouraged engineers to take English classes in college and stressed that effective written communication is a key to project management in structural engineers. Mr. Mast spoke of the satisfaction of being involved with all aspects of structural design, from concepts to construction and the pride that comes with seeing your work being built. Mr. Jacobson noted his firm's tradition of doing prime work and the benefits of being in more control of the work (and profits) than contracting through architects.

The panelists' shared experiences and anecdotes clearly demonstrated how the World's Fair was a landmark event for structural engineering in the Pacific Northwest, leading to many engineering advancements. The projects provided the three engineers with tremendous experiences at the beginning of their careers, and all three continue engineering to this day.

For more information on the Structural Engineers of the World's Fair, please visit the Structural Engineers Foundation of Washington and SEAW Hall of Fame websites at <https://sites.google.com/site/sefoundationwa> and <https://sites.google.com/site/sehalloffame>.

Peter Somers is a Principal with Magnusson Klemencic Associates and the Seattle Chapter Vice President. He can be reached at psomers@mka.com and 206-215-8346.

January 2013 Meeting:

At our first meeting of 2013 we will reinstitute our annual student night at the UW Waterfront Activities Center. The Tuesday, January 22 meeting will include a structural engineering firm showcase and presentations by students from the University of Washington and Seattle University. Watch for details in the January newsletter.

From the Professional Practices Committee:

The Practice of Structural Engineering

SEAW Professional Practices Committee

October 2012

Washington State defines the practice of structural engineering in the RCW as:

18.43.020 (5)(a) "Practice of engineering" means any professional service or creative work requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical, and engineering sciences to such professional services or creative work as consultation, investigation, evaluation, planning, design, and supervision of construction for the purpose of assuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works, or projects.

Since this definition is one sentence of 72 words and it is written in classic legalese with a number of ideas combined together, I found it helpful to first separate some of the qualifiers and group them into individual categories. These include:

WORK: Professional service or creative work

TRAINING: Engineering education, training, and experience

KNOWLEDGE: Special knowledge of the mathematical, physical, and engineering sciences

DESIGN: Specifications and design in connection with utilities, structures, buildings, machines, equipment, processes, works, or projects.

There are probably a few different ways to break this down and look at it but it appears to us that the definition is made up of two parts: "[...professional service or creative work requiring engineering education, training, and experience] and [the application of special knowledge of the mathematical, physical, and engineering sciences to such professional services or creative work...]. The question then becomes how the two parts are reliant upon each other. On the one hand, the two parts could be interpreted as being dependent upon each other. In other words, the first part states that the practice of engineering covers any WORK that requires TRAINING and the second part furthers this by stating that the practice of engineering must also include the application of KNOWLEDGE to the WORK for the purposes of compliance with a DESIGN. In this case, it is important to note that the practice of engineering is not just about one's training but it is also about the application of one's knowledge of the mathematical, physical, and engineering sciences to the work.

On the other hand, the two parts noted above could be interpreted as two separate ideas. In other words, the practice of engineering is either WORK that requires TRAINING or it is the application of KNOWLEDGE to the WORK for the purposes of compliance with a DESIGN. Although this is how we would tend to view it, we believe this interpretation is a less defensible since the authors have used "and" instead of "or".

The Alaska State definition is as follows:

08.48.341(12) The practice of engineering means the professional service or creative work, the adequate performance of which requires the specialized knowledge of applied mathematics and sciences, dealing with the design of structures, machines, equipment, utilities systems, materials, processes, works, or projects, public or private; the teaching of advanced engineering courses in institutions of higher learning; the direction of or the performance of engineering surveys, consultation, investigation, evaluation, planning, and professional observation of construction of public and private structures, works, or projects and engineering review of drawings and specifications by regulatory agencies; "practice of engineering" may by regulation of the board include architectural building design of minor importance, but it does not include comprehensive architectural services;

Much of the content from Alaska is present in Washington's definitions but they have reworded it to be a bit clearer and it appears to align with the second interpretation we noted above. An interesting addition in Alaska's definition is the inclusion of engineering teaching. The Washington definition doesn't seem to have any provisions for teaching.



\$3,000

Structural Engineering Scholarship

SEAW is offering a \$3,000 scholarship to a current college or university student majoring in structural engineering.

Applicants must be:

- ◆ U.S. citizen and resident of Washington State
- ◆ Senior undergraduate or graduate student
- ◆ Enrolled in a program of study majoring in structural engineering
- ◆ Having a commitment to making a career in the practice of structural engineering

Scholarship application materials are posted on the web at www.seaw.org, and can be obtained by e-mailing seaw@seaw.org or by phoning 206/682-6026.

Application deadline for the 2013 award is March 31.

YMF Corner

-by Jennifer Ahlport

Like many recent hires, when I moved to Seattle it was for my first job after graduating from school. It was a completely new city for me—flying into town for interviews was actually the first time I ever stepped foot in Seattle. Like many of you, I started working for a firm that was well known, but fairly small in Seattle. And as the saying goes, it's not what you know, but who you know that matters. While I don't necessarily agree with this wholeheartedly, there is a certain amount of truth to it.

One of the first things I did when I moved up to Seattle was to join SEAW and start going to some of the YMF events—it really wasn't that hard to tear me away from the analysis I was working on to go to the monthly happy hour. I found it interesting to hear what types of projects my peers were working on, especially those at companies I had considered working for. It amazed me how such a group of people with similar academic backgrounds could be branching into such different projects—all of which fell under the umbrella of structural engineering.

Something I had realized then, and something that holds true now, is that the structural engineering community is actually a rather small one. Whether it is where you went to school, people you've worked with or met at conferences, or any other way you can imagine, it becomes very easy to see the bubble of the structural engineering world. For me, the memory that shows it the most was when I signed up for an after-work beginning Italian class with nine other students—one of whom happened to also be a structural engineer. Within five minutes of talking to each other, we had already found we knew multiple people in common, even though we had never met.

Unlike some other fields, structural engineering is one that at its core encourages collaboration between competing companies. In order to foster this collaboration, people need to look outside their daily bubble of people and meet those they may end up working on a project with, or coauthor a paper with five years or so in the future. So I encourage all of you to come out to some of our events and start expanding your structural engineering bubble. After all, who can say no to some low pressure networking and free food?

Upcoming YMF Events

- | | |
|--------|--|
| Dec 8 | Habitat for Humanity, 8:45 AM—4:30 PM, La Fortuna, Renton |
| Dec 11 | Happy Hour, 5:00-7:00 PM Diller Room, 1224 1st Ave., Seattle |
| Jan 8 | Happy Hour, 5:00-7:00 PM Urbane, 1639 8th Ave., Seattle |
| Jan 16 | Eastside Happy Hour, 5:00-7:00 PM Taphouse, 550 106th Ave. NE, Bellevue |

The Performance Company

The PRESSURE GROUT COMPANY
More than 45 Years of Innovative Grouting

Densifying, Solidifying, Improving Soils
Mitigation of Soil Liquefaction
Tie-downs & Tiebacks/Anchors
Thwarting Soil Settlements
Stone Columns
Vibrated Concrete Columns
Rapid Impact Compaction

206•621-0900
E-mail: pgc@pressuregrout.com
www.pressuregrout.com

COMPACTON GROUTING
CHEMICAL GROUTING
LENS GROUTING
PRESSGROUT PILES

YMF Leadership

President:

Jennifer Ahlport
jahlport@gmail.com

Vice President:

Tyler Kurz
tkurz@dc-engineers.com

Social Representative:

Krzysztof Zaleski
kzaleski@mka.com

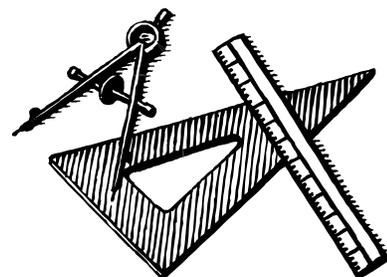
Past Chair:

Natalie Low
gmatann@gmail.com

Outreach Representative:

April Shen april.c.shen@gmail.com

Created in 2007, the Younger Member Forum provides networking and social opportunities to SEAW members 35 and under, as well as new non-member engineers and students. All SEAW members are welcome to participate in YMF functions.





Registration begins December 1, 2012
 First session begins January 14, 2013
www.aisc.org/nightschool

AISC Night School

The first in a series of night school programs

Fundamentals of Connection Design with Tom Murray, P.E., Ph.D.

- Jan 14: Fundamental Concepts, Part I
- Jan 28: Fundamental Concepts, Part II
- Feb 4: Shear Connections, Part I
- Feb 11: Shear Connections, Part II
- Feb 25: Moment Connections, Part I
- Mar 4: Moment Connections, Part II
- Mar 11: Moment Connections, Part III
- Mar 18: Bracing Connections

Monday nights 7 p.m. Eastern Time (90 minutes each)
 Two ways to register:

8-session Package

- for one person
- 12 PDHs
- \$500/member
- \$900/non-member
- \$250/student/faculty

Individual Session

- any number can attend
- 1.5 PDHs per session
- \$185/member*
- \$285/non-member*
- \$155/student/faculty*
- *price per connection



There's always a solution in steel.

American Institute of Steel Construction
 One E Wacker Drive, Suite 700
 Chicago, IL 60601
www.aisc.org 312.670.2400

Co-sponsored by:



SEAW Committee Corner (Visit www.seaw.org for updates)

Dedicated to promoting greater communication between the membership and committees, and to encourage all SEAW members to become active participants in the committee(s) of their choice. Many committees are now using GoToMeeting web-conferencing software to facilitate remote attendance at meetings. Ask the chair for more details.

| Committee Name | Meeting Information | Topic(s) | Contact Information |
|---|--|---|---|
| Building Engineering | No information available. | | Scott Beard, 253.591.5019 sbeard@cityoftacoma.com |
| Disaster Preparedness & Response | Meets every third Tuesday, next meeting 12/18, 12:00-1:00 (bring your lunch) Quantum Consulting Engrs., 1511 3rd Ave, #323, Seattle | Review draft white paper, "The Engineer's Role in Disaster Response." Updates: upcoming ATC-20 trainings (Cal EMA, IS-100, venues). | Joyce Lem, 425.450.6345 Joyce.lem@hdrinc.com for remote access via GoToMeeting contact John Riley at jriley@quantumce.com |
| Earthquake Engineering | December meeting: Thursday, Dec 6 from noon-1:30pm at MKA, 1301 5th Ave Ste 3200. Contact chair for webconferencing connect information. | EEC will start to prepare the seismic seminar for IBC 2012. Any interested person should plan to attend the October meeting or contact Tom or Andy. | Tom Xia, 206.332.1900 txia@dc-engineers.com Andy Taylor, 206.622.5822 andyt@kpff.com |
| Education | Monday, December 1, 12:00-2:00 pm, Seattle Municipal tower, 700 5th Ave, 22nd floor, rm 2214. | Upcoming seminars, and committee organization. | Ardel Jala 206.684.0573 ardel.jala@seattle.gov Mike Wright, 206.402.5156 Mwright@lwo-se.com |
| Existing Buildings | No meeting in December | | Bryan Zagers, 206.343.0460 bryanz@cplinc.com |
| Legislative | No meeting in December | Chair attends AELC meetings | Tim Nordstrom, 206.707.3980 timn@starseismic.net |
| Professional Practices | No meeting in December | | John Tawresey, 206.622.5822 johntaw@aol.com |
| Public Information | Thursday, December 6, 4:00-5:00pm, Degenkolb Engineers, 600 University St, Ste 720 | Introduction of new chair. | Darrell Staaleson, 253.520.0388 dstaal@staaleng.com |
| Refresher Course | January meeting TBA; course to be held Tues/Thurs evenings Feb-March. | Instructors needed for steel, wood, cold-formed steel, and bridge design sections. | Mark Moorleghen, 206.332.1900 mmorleghen@dc-engineers.com |
| Scholarship | No meeting scheduled. Scholarship applications are reviewed in March/April | Selection of SEAW Scholarship award recipients | William H Mooseker, 425.776.0646 cascade_bill@comcast.net |
| Seattle Users of BIM Structural (SUBS) | To be announced | | Irina Wong, chair 206.262.9240 iwong@degenkolb.com |
| Snow Load | No scheduled meetings. | Stay tuned! | John Tate, 509.972.3079 Jatce@charter.net |
| Sustainability | No meeting in December | Visit the committee blog at http://seawsustainability.blogspot.com/ | Adam Slivers, 206.622.5822 Adam.slivers@kpff.com |
| Technology | To be scheduled. | Work is progressing on database side of SEAW website. Meetings will be scheduled for design. | Steve Dill/Lynnell Brunswig 206.622.5822/206.682.6026 steve.dill@kpff.com seaw@seaw.org |
| Wind Engineering | No information available. | | OPEN |
| WABO/SEAW Liaison | Thursday, 12/13, 11:30-1:00, Bellevue City Hall, 450 110th Ave. NE | Work on white papers continues. | Charlie Griffes, 206.285.4512 Charlie@ctengineering.com |



"Having an accurate, easy-to-use way to record our billable hours has resulted in a net gain of over \$30,000 in our first year of use alone."

- Al Truss, President, Fountainhead Group Consulting, Ltd.
BillQuick user

You Build It... We Bill It

TIME TRACKING | PROJECT MANAGEMENT | BILLING

- Faster Billing
- Time & Expense Tracking
- Project Management
- Remote Access
- Budget Tracking
- Powerful & Professional Invoices

Customizable Invoice Templates

Page 1 of 1



Hendricks Consulting LLC
2001 August Drive, Suite 300
Los Angeles, CA 90008
Tel: (855) 687-1023 Fax: (951) 958-2121
admin@hendricks_consulting.com
www.hendricks_consulting.com

| | |
|--------------|--------------|
| Invoice Date | Invoice Item |
| Feb 1, 2011 | 1020 |
| Billing From | Billing To |
| Jan 15, 2011 | Jan 31, 2011 |

Ms. Rhonda Ware
Factor Foundation
38 Bayberry Street
Futura, CA 94501

Project ID: TSL08
Project Name: Long Beach Harbor
Manager: MC

Invoice

| Item | Item Description | Contract Amount | % Complete | Price Billing | Due Invoice |
|---------------|-----------------------------|--------------------|------------|-------------------|--------------------|
| 01.001.000 | Schematic Design | \$2,000.00 | 75% | \$1,500.00 | \$4,000.00 |
| 01.001.000 | Design Development | \$4,000.00 | 50% | \$2,000.00 | \$2,000.00 |
| 01.001.000 | Construction Documents | \$4,000.00 | 10% | \$400.00 | \$4,000.00 |
| 01.001.000 | Construction Administration | \$2,000.00 | 5% | \$100.00 | \$2,000.00 |
| TOTAL: | | \$12,000.00 | | \$4,000.00 | \$12,000.00 |

Consultant Fees:

| Description | Date | QTY | UNIT | AMOUNT | AMOUNT |
|--------------------------------|---------|------|------------|---------------|-------------------|
| Structural Engineer Project #1 | 07/2011 | 1.00 | \$4,000.00 | | \$4,000.00 |
| | | | | TOTAL: | \$4,000.00 |

Reimbursable Expenses:

| Sub | Date | QTY | UNIT | AMOUNT | AMOUNT |
|-----|---------|------|------------|---------------|-------------------|
| Sub | 04/2011 | 1.00 | \$2,000.00 | | \$2,000.00 |
| | | | | TOTAL: | \$2,000.00 |

Total Invoice Due: \$12,000.00

This invoice is due upon receipt.

Account Summary

| Billed To Date | Paid To Date | Balance Due |
|----------------|--------------|-------------|
| \$12,000.00 | \$0.00 | \$12,000.00 |

Call Us Today for a **FREE 30-Day Trial Copy**
www.BQE.com/SEAW | (855) 687-1023

Integrates with



Meetings, Seminars and Announcements

S.K. Ghosh Seminar December 18, 2012

S.K. Ghosh Associates, Inc. will hold a full-day seminar on "Changes Between ASCE 7-05 and ASCE 7-10 on Tuesday, December 18, from 8:00 am – 5:00 pm at the Red Lion Hotel Seattle Airport. This seminar will present a detailed and comprehensive overview of the substantive changes from ASCE 7-05 to ASCE 7-10. Major revisions have taken place in both the wind design and the seismic design provisions. Wind design has changed more substantially than any time since the publication of ASCE 7-95. The reorganization of the wind provisions will be discussed and the changes to the wind maps and the corresponding changes to the load factors will be explained. In addition, the new simplified version of the general analytical procedure under Method 2, which is applicable to buildings of all heights, will be addressed.

Explanation of the new seismic maps will be presented and how they affect seismic design results will be discussed. There are many other significant changes to the ASCE 7 seismic provisions (Chapters 11, 12, 21 and 22), such as changes to Table 12.2-1 (the R-values table) and new provisions for wall anchorage, that will be discussed.

In addition to covering changes to the wind and seismic provisions, the seminar will also present a detailed and fairly comprehensive overview of the substantive changes to the other provisions found in ASCE 7. These include the introduction of performance-based design procedures, enhancement of the general structural integrity requirements, revisions to load combinations, new live loads, and changes to snow load provisions.

Speakers: S. K. Ghosh, Ph.D. & Susan Dowty, S.E.

SEAW members will receive a discounted registration fee of \$225 prior to December 11. For full details and registration, visit <http://skghoshassociates.com/seminar-id-104/>.

Refresher Course 2013 Begins February 5th

SEAW Seattle Chapter, in cooperation with the UW Department of Civil Engineering, will hold its annual Refresher Course on Tuesday and Thursday evenings from February 5 through March 19, 2013. The course is designed to assist those engineers preparing for the NCEES structural license examinations. Twelve two-hour lectures will present information dealing with analysis, lateral forces, concrete design, structural steel design, prestressed concrete, wood structures design, masonry design, and foundations. In keeping with the exam content, cold-formed steel and bridge design sessions have been added. Speakers are experienced local structural engineers.

Also available is the "Half Refreshed" option for those just wishing to brush up on their skills. Choose any six sessions for a reduced rate. Whatever level of experience or number of licenses you have, you'll appreciate this opportunity to learn from the masters.

Notes Available on CD

The SEAW Refresher Course notes have long been a resource for those preparing to take the exam but unable to attend the course. Registrants of the "Notes Only" option will receive them pdf format on a CD. Notes are updated annually to reflect the code referenced by the current exam.

Online registration at www.seaw.org opens Dec. 10.

EERI Annual Meeting Registration Open

Registration for the 2013 Annual Meeting of the Earthquake Engineering Research Institute (EERI) is now open online at <https://eeri.org/cohost/registration/eeri-2013-annual-meeting>. The meeting will be held February 12-15, 2013, at the Grand Hyatt Seattle, Washington, in the heart of Seattle's thriving retail and theater district, steps from Pike Place Market, the Seattle waterfront, and the Space Needle. With the theme "Building Resil-

ient Communities Through Policy and Mitigation," the meeting has much to offer engineers, scientists, emergency managers, and policy makers, highlighting earthquake policy issues while also offering insights from researchers and practitioners from around the country. A half-day pre-meeting workshop will be held February 11 on "The Canterbury Earthquakes—Lessons and Implications for Regions Worldwide."

If you register by January 15, the registration fees are \$475 for regular EERI members (\$650 nonmembers) and \$295 for EERI young professional, student, and retired members. For nonmembers who become EERI members, the fee is \$700 - a combined savings of \$220. After January 15, fees will increase by \$100. The program brochure is available as a PDF on the above registration web page, which also has a link to make hotel reservations. Register today to take part in this program that will deepen and broaden your understanding of earthquake risk reduction, and where you will meet other leaders in the field!

First Announcement SEAW Earthquake Engineering Committee's Spring 2013 Seminar:

Seismic Design Using the 2012 IBC and ASCE 7-10

The 2012 *International Building Code*, along with the 2010 edition of ASCE 7 *Minimum Design Loads for Buildings and Other Structures* will be adopted in Washington State in July 2013. This spring the SEAW Earthquake Engineering Committee (EEC) will present a seminar on the revised seismic provisions of the 2012 IBC and ASCE 7-10. Topics to be covered will include system and analysis requirements; seismic design criteria; seismic hazards and the revised seismic maps; geotechnical engineering requirements; requirements for inspection, testing, and observation; design and anchorage requirements for nonstructural components; and revised structural design requirements for structural systems, including

concrete design, anchorage to concrete, steel design, masonry design, and wood and cold-formed steel design.

This day-long seminar will take place on a spring Saturday in Seattle. The date and exact location will be announced in January 2013. Registration will include refreshments at breaks, a box lunch, and a notebook containing a printed copy of all seminar notes.

2013 PNW Bridge Inspectors Conference: Maximizing your Bridge Inspection Program

Tuesday 4/23/2013 to Thursday 4/25/2013

Hilton Portland & Executive Towers, 921 Southwest 6th Avenue, Portland, Oregon

The Pacific Northwest State DOTs and FHWA are jointly hosting the 2013 Pacific Northwest Bridge Inspectors' Conference. The conference provides a forum for bridge inspectors and managers to share information, innovations, ideas, and best practices. Additional opportunity will be provided for the attendees to gain a current national perspective on bridge inspection from AASHTO and FHWA. The conference will provide continuing education for bridge inspectors.

Who Should Attend?

City, county, state, federal, and consultant bridge inspectors and bridge managers who are responsible for:

- Bridge inspection policy and procedures
- QC/OA
- Preparation and maintenance of bridge inventories
- Bridge inspections
- Load ratings
- Bridge management systems

For information, visit <http://cm.wsu.edu/ehome/45069/76270/?&>

Bridge product and engineering service exhibitors are also encouraged to participate.

Continued on Page 9

Employment Opportunities

Facilities-Senior Civil Engineer

Art Anderson Associates, Bremerton, WA (AAA) AAA is a Bremerton, WA-based engineering services firm offering a broad range of capabilities and expertise. The company successfully integrates the disciplines of landside facilities and marine vessel engineering to deliver unique and challenging projects for a diverse client base. Recent projects have included new and renovation design for military, research and ferry vessels; industrial and residential facility improvements at sensitive military installations; and unique waterfront projects such as marinas, ferry terminals and fish passage facilities.

REQUIRED: BS or higher in Civil Engineering, WA Civil

PE License, 5 - 10 years of A/E industry experience, working knowledge of IBC-IRC-ASCE7, excellent computing skills with MS Office, AutoCAD experience, ability to manage multiple simultaneous projects, excellent communication skills, selfstarter with excellent team working ability.

DESIRED: advanced civil engineering degrees; civil licensure in other states, especially CA & AK; computer analytical skills using RISA software; business development experience; structural licensure in WA; experience with marine & landside transportation facilities and planning; geotechnical expertise; familiarity with AutoDesk Civil 3D and MS Project software.

How to Apply: Follow this URL:

<http://www.artanderson.com/jobs/current-opportunities/166-facilities->

[civil-engineersenior/](#)

Art Anderson Associates is an Equal Opportunity Employer.

Project Manager Engineers

Seattle Structural is looking for licensed PEs and SEs with 3 – 20 years of experience to help lead this growing firm located in downtown Seattle. This is a great opportunity to work on a variety of private, institutional, healthcare, educational and commercial projects both domestically and internationally.

Candidates must have experience in all building types. Experience with mid-to-high-rise, post tensioned concrete, high-seismic lateral analysis, deep foundation, or marine construction desired. The ideal candidate will have excellent communication and

technical skills, the ability to lead other engineers, manage multiple projects and a commitment to quality client service. Chinese language candidates are encouraged to apply as well as applicants with REVIT experience.

We offer a competitive salary and a variety of benefits including medical, retirement and many more.

Please address inquiries to: Howard Burton, President, Seattle Structural PS Inc.

1420 Fifth Avenue, Suite 425
Seattle, WA 98101

Phone: (206) 343-3000

Fax: (206) 343-3013

HBurton@SeattleStructural.com

Seattle Structural is an Equal Opportunity Employer.



Meetings, Seminars and Announcements Cont.

University of Washington to Host 2013 National Student Steel Bridge Competition

The University of Washington is excited to announce that they have been selected to host the 2013 National Student Steel Bridge Competition (NSSBC)! The competition will be held on May 31 and June 1, 2013 and is organized by both the American Institute of Steel Construction (AISC) and the American Society of Civil Engineers (ASCE). Student teams from approximately 45 universities from across the U.S., Canada, and Mexico that have qualified for the national competition by placing in the top two in their regional competition will be descending on Seat-

tle for the NSSBC. It is estimated that more than 650 top civil engineering students will be visiting the UW and Seattle for the event, making this a great recruitment activity for local engineering firms. The teams compete with approximately 1/5 scale steel bridges on the basis of construction speed, lightness, stiffness, construction economy, structural efficiency and aesthetics.

The preliminary schedule includes a public display of all competing bridges and a chance to talk with the students on Friday May 31, to be held in Red Square on the UW campus, weather permitting, or in Hec Edmundson Pavilion. The competition itself will be held on Saturday,

June 1 in Alaska Airlines Arena at Hec Edmundson Pavilion and will be open to the public.

In addition to hosting the NSSBC, UW will have its own steel bridge competition team composed of dedicated and determined civil engineering students. These enthusiastic students will spend countless hours throughout the school year in preparation for the competition through weekly team meetings for design considerations, moving forward to bridge fabrication and weekend assembly practices, and concluding with the competition itself.

The UW Student Steel Bridge Team will soon begin fundraising efforts to

support the cost of hosting the NSSBC and SEAW Seattle Chapter has agreed to support them by providing advertising and in-kind support. There will be many opportunities for SEAW members and firms to both participate in the NSSBC and to show your support for the UW, including helping with organization, fundraising, and judging. More information is available at

<http://www.ce.washington.edu/students/NSSBC.html>.

To get involved with NSSBC or to donate to the effort, send email to nssbc13@u.washington.edu and make sure to mark your calendars for May 31 and June 1, 2013!

Earn 6 AIA/CES CEHs or PDH credits free

Seattle Wood Solutions Fair

FEBRUARY 27, 2013

Washington State
Convention Center



With a full day of seminars and a trade exposition, the Seattle Wood Solutions Fair offers a unique professional development opportunity for architects, engineers and anyone else interested in wood's exciting design possibilities.

Choose up to six seminars from topics such as:

- Offset Diaphragms and Shear Walls
- Modular Wood Framing Goes Vertical
- Understanding the Design Requirements for Five-story Wood-framed Mid-rise Construction
- LCT One: Case Study of an Eight-story Wood Office Building
- Case Study: Wood Podiums in Mixed-use Design
- Glued Laminated Timber: An Innovative and Versatile Wood Product
- Case Study: Centre Pompidou-Metz
- Building Envelopes: Lessons Learned by a Commercial Contractor

Attendance is free to design and building professionals.

For more information and to register, **visit woodworks.org**.



WoodWorks

Wood costs less and delivers more

*WoodWorks is an initiative of the Wood Products Council,
a cooperative venture of major North American wood associations.*



Scan here to
register at
woodworks.org

WoodWorks is an approved AIA provider.



Photos: Arch Wood Protection; 3555 Hayden, Eric Owen Moss Architects, Tom Banner Photography; Drs. Julian and Raye Richardson Apartments, David Baker + Partners, photo Bruce Damonte



**STRUCTURAL ENGINEERS ASSOCIATION
of WASHINGTON • Seattle Chapter**

PO Box 44 • Olympia WA 98507 • 206/682-6026 • www.seaw.org

Seattle Chapter Committees & Chairs

| | |
|---------------------------------|------------------|
| House/Program | Peter Somers |
| Refresher Course | Mark Moorlegghen |
| Newsletter | Lynnell Brunswig |
| Presentations/Awards | Cale Ash |
| Engineer of the Year | Ed Huston |
| Governance | Howard Burton |
| Committee Liaison | Tom Corcoran |
| YMF | Jennifer Ahlport |
| Seattle Users of BIM Structural | Irina Wong |

Statewide Committees & Chairs

| | |
|------------------------|---------------|
| Code Advisory | John Hooper |
| Earthquake Engineering | Tom Xia |
| Building Engineering | Scott Beard |
| Existing Buildings | Bryan Zagers |
| Professional Practices | John Tawresy |
| Wind Engineering | Open |
| Scholarship | Bill Mooseker |
| Legislation | Tim Nordstrom |

| | |
|------------------------|-----------------------|
| Education | Mike Wright (interim) |
| Finance & Auditing | Ted Smith |
| Disaster Prep/Response | Joyce Lem |
| Public Information | Darrell Staaleson |
| Sustainability | Adam Slivers |
| Snow Load | John Tate |
| SEAW Historian | Don Northey |

For Committee contact information, visit www.seaw.org and click the Committee page

SEAW Calendar

DECEMBER, 2012

| | | |
|----------|------|---|
| ***** | | Scholarship Applications Solicited |
| Saturday | 8th | Habitat for Humanity: 8:45am-4:30 PM LaFortuna, Renton |
| Tuesday | 11th | YMF Happy Hour 5:00 PM The Diller Room, downtown Seattle |
| TBD | | Seattle Chapter Board meeting location |
| Thursday | 20th | January Newsletter Deadline From the Board: Tom Corcoran |

JANUARY, 2013

| | | |
|---------|------|--|
| ***** | | Dues Statements Go Out |
| Tuesday | 8th | YMF Happy Hour 5:00-7:00 PM Urbane, 1639 8th Ave, Seattle |
| Wed | 16th | YMF Eastside Happy Hour 5:00-7:00 PM Taphouse, 550 106th Ave NE, Bellevue |
| Monday | 21st | February Newsletter deadline From the Board: Ted Smith |
| Tuesday | 22nd | Seattle Chapter Board Meeting Seattle Chapter Dinner Meeting Student/Firms showcase at UW WAC *election of nominating committee |
| Friday | 25th | State Board Meeting Chapter financial reports to State due |

Membership

Membership Postings

In accordance with SEAW bylaws, membership applications are vetted by the Executive Director, granted probationary status by the chapter board, and posted for membership comment. Membership is considered accepted 30 days after posting if current year dues are paid and no member objections have been received.

Applications

Jonathan Gibson
Cornerstone Engineering, Inc
BSME, Montana State University
Licensed PE, Washington
Class: Member PE

Seattle Chapter Unpaid Members

| | |
|------------------|-------------------------|
| John Apolis | Diana Leonard |
| Noel Baca | Isaac Loeb sack |
| Joanne Bayuga | Andrew Marks |
| Abdul Chahim | Daniel Munn |
| Laila Cohagen | Joy Naganuma |
| Benton Cook | Richard Oehmcke |
| Gerald Dorn | Myles Parrish |
| William Gibb | Sri Rajah |
| Louis Heaton | Robert Schultz |
| Wesley Isbell | Jean Spangler Shortreed |
| Deepali Jodh | Luke Showalter |
| Jennifer Johnson | Kenneth Simons |
| Sean Johnson | Luke Su |
| Pong Jongitirat | Joshua Welch |
| Eric Kelley | Wei Yang |
| Becky Lee | |

WATCH YOUR EMAIL FOR YOUR 2013 DUES INVOICE!

Dues invoices will be emailed within the first two weeks of January. In accordance with SEAW bylaws, annual dues shall be payable in advance within (30) days of written notification.