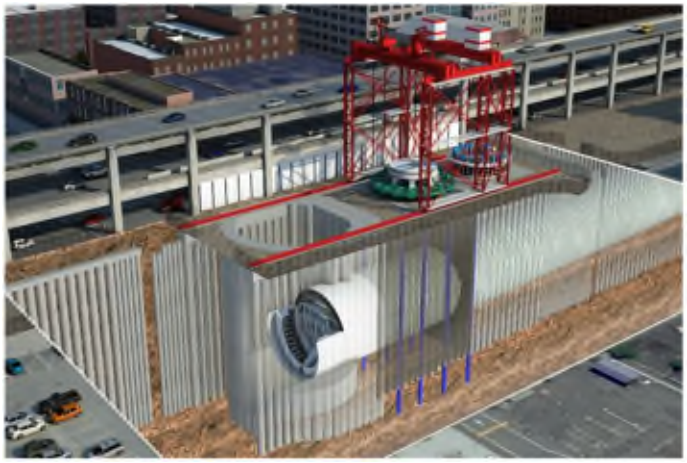
EQUILIBRIUM

Newsletter of the Seattle Chapter
Structural Engineers Association of Washington

November 2014

In This Issue

A Closer Look at the Alaskan Way Viaduct Replacement Program



SR 99 Tunnel Access Pit Simulation

We keep hearing about the SR99 Tunnel Project. Tunneling machine issues, vibration, unexpected obstacles, groundwater, tunnel stoppage, exploratory shafts, hyperbaric chambers, delays, massive cranes to build even more massive cranes, repair access pit, and what now? Shell deposits being evaluated for archeological or cultural significance.

The State Route 99 Alaskan Way Viaduct has been a fixture on Seattle's waterfront and a vital north-south route through downtown for more than 60 years. The WaAshington State Department of Transportation is replacing the seismically vulnerable structure with a tunnel and other projects that will reshape the SR99 corridor. Join Tim Moore, WSDOT Mega Projects Bridge Manager, for an overview of this mega project, including current construction taking place at the tunnel portals and the SR99 tunnel contractor's plans to access and repair the tunneling machine.

Register early for this meeting—attendance will be high! PDH Value: 1.5.

Meeting Information:

Date: Tuesday, November 18, 2014

Place: Hotel Monaco Seattle
1101 Fourth Avenue, Seattle

Note: Valet parking for SEAW meeting attendees is $12.00, space available.

Time:

5:00—6:00 PM	Registration/Networking
6:00—6:40 PM	Dinner
6:45—7:00 PM	Welcome/Introductions
7:00—8:15 PM	Program

Menu: Chicken in Roasted Pepper Sauce
~or~
Seasonally Prepared Handmade Gnocchi

Price:

SEAW Members	$40.00
Non-Members	$50.00
Students	$15.00
Late Registration, add	$ 5.00

Registration required—Prepayment appreciated.
Register online at www.seaw.org

Registration deadline is 5:00 PM, Thursday, Nov 13..

VISA/Mastercard accepted online only, not at the door.
No-shows and cancellations after the deadline are subject to full charge.

From the Board: SEAW Hall of Fame (HOF)

-by Jason Black

I spent some time going through the Hall of Fame (HOF) on the SEAW web site, which includes a list of all the Seattle Chapter Presidents since 1950. Notably, all are men except Shelley Clark (2007), and several have the now-less-common first names of Chauncey, Elmer, Roscoe, and Homer.

Almost all HOF member bios include recitals of great firms led, notable projects accomplished, prestigious awards won, and influential committees served. No offense to any HOF'ers (including my colleagues at KPFF), but Arthur B. Andersen's bio stood out to me because it included the following excerpt from a keynote speech he delivered:

> *I believe we must revitalize the engineer in the ethics of his profession and his technical responsibility. We must be responsible for our acts and we must constantly practice awareness of the impact of our actions on the rest of society. It is insufficient to suggest that you only did what they wanted. We must become involved in the community. Leadership means being in the forefront directing investigation and ultimately the solution to maximum potential and highest quality. We must be perceptive and strive for the best and have the courage to stand up and be counted.*
>
> *Herbert Hoover expressed very well the extent of the responsibility and liability of the engineer for his work when he wrote: "The great liability of the engineer compared to men of other professions is that his works are out in the open where all can see them. His acts, step by step, are in hard substance. He cannot bury his mistakes in the grave like the doctors. He cannot argue them into thin air or blame the judge like the lawyers. He cannot, like the architects, cover his failures with trees and vines. He cannot, like the politicians, screen his shortcomings by blaming his opponents and hope the people will forget. The engineer simply cannot deny he did it. If his works do not work, he is damned...*
>
> *On the other hand, unlike the doctor, his is not a life among the weak. Unlike the soldier, destruction is not his purpose. Unlike the lawyer, quarrels are not his daily bread. To the engineer falls the job of clothing the bare bones of science with life, comfort, and hope. No doubt as the years go by people forget which engineer did it, even if they ever knew. Or some politician puts his name on it. Or they credit it to some promoter who used other people's money... but the engineer himself looks back at the unending stream of goodness which flows from his successes with satisfactions that few professions may know. And the verdict of his fellow professionals is all the accolade he wants." (Source: Equilibrium November 1993)*

As many know, Arthur B. Andersen was a founding partner of ABKJ. He was the SEAW Seattle President in 1962, SEAW President in 1963, and was named SEAW Engineer of the Year in 1983.

I never met him, and frankly, know very little about him. But I do like what he was getting at with this speech and the reference to Hoover's article...and also am still fascinated that a President of the United States would ever acknowledged the responsibility that an engineer carries.

Maybe some of you will find something thought provoking from the Hall of Fame, which can be found online at:

www.seaw.org/hall-of-fame

Jason P. Black, PE, SE. is a Principal in the Seattle office of KPFF Consulting Engineers. He proudly serves on the SEAW Board as a Director for the 2013-2016 term. He can be reached at jasonb@kpff.com

Happy Thanksgiving

October Meeting Recap

-by Morgan Wiese

The October dinner meeting featured Randy Wells and Gene Bickel of Galvanizers Company of Portland, Oregon, who gave a presentation on what engineers need to know about galvanizing. The presentation included multiple projects their company has worked on throughout the years, with a main focus on a bridge up in Index, Washington, that required a large amount of galvanizing due to the harsh conditions it was subjected to.

The main focal points of the presentation were:

- The four steps of galvanizing: preparation, cleaning, galvanizing and inspection—and why each step is important.
- How galvanizing members can lead to a relatively maintenance-free life of those members. When done properly, it is possible to not have any upkeep required for forty years or more. They gave a specific example of a bridge built in 1956 that to this day, fifty-eight years later, still has a thick enough layer of galvanizing on it to last many more years before maintenance will be required.
- The different layers that are formed during the galvanizing process. There are four layers containing different amounts of zinc above the steel base when you galvanize a member. These layers all offer corrosion protection and are harder than the base metal, which also allows for a good surface abrasion protection.
- The role of silica in corrosive protection. It is important to call out the appropriate amount of silica to be used in your specification. When following the ASTM standard, there are two allowable criteria but each one results in a different end product appearance. Specifying the correct amount you will result in less variation in the final product.
- Field repair procedures are very important in galvanizing. The ASTM requirements are not well defined, so it is important to have good specification information to ensure any field damage or field splices of members are adequately protected, otherwise this could lead to a weak spot in the galvanizing and could potentially result in premature corrosion.
- When repairing damage or covering items not shop galvanized there are two different methods that can be used. The first is a zinc-stick, which involves prepping the area that needs protection with heat and then melting zinc over the area. The second method is using a spray paint, which needs several coats and may require more touch up over time as the paint may flake off.

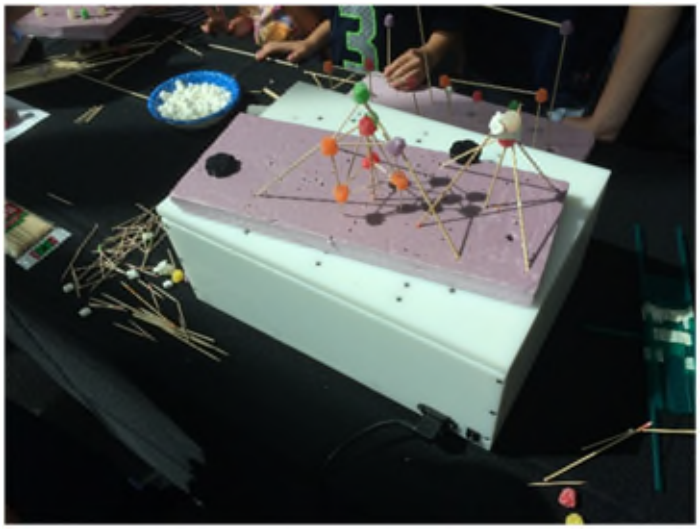
In conclusion, we learned that galvanizing members has several advantages over painting or powder coating of members. Galvanizing can last much longer before requiring maintenance and it also allows for better abrasion protection since the galvanizing coat itself is harder than the base steel. And not only is galvanizing layered on the outside, but it is also on the inside of members, so the member is protected inside and out. Lastly, the turnaround time can be much faster than other protection options. In the instance of a time-critical item, the turnaround time can be just a few hours.

Morgan Wiese is an EIT with Integrus Architecture. Morgan joined SEAW in March of 2013, and currently serves as the Social Chair of the Young Member Forum. He can be reached at mwiese@integrusarch.com.

YMF Corner

-by Morgan Wiese

In September, the YMF participated in the Pacific Science Center's Engineer-It Day. This event connects young children to the professions of engineering and surveying. The YMF was there to explain and show people how we design structures to resist earthquakes in the Seattle area. Using toothpicks, gum drops, and marshmallows, kids were able to create their own structures and then test them on a shake table to see how well they could endure a simulated seismic event. Everyone who came by seemed to have a great time testing the different structures they could build.



At the end of August we had the annual YMF summer picnic, and the weather was fantastic, holding out for us without ducking under a shelter! We all met at Gas Works Park and had BBQ, threw a football around, and got to know each other, and the type of work that each person does, better.

Lastly, are you looking for a way to get more involved in SEAW but feel you can only get involved after years of experience? This seems to be how many younger engineers feel, but it is far from the truth! Committees are very welcoming of younger engineers who want to get involved, and coming to a happy hour is a great way to find out more about SEAW and the different committees. We are working to have committee members and SEAW board members at each happy hour to answer any questions you may have about how to get more involved. This past month we had Andy Taylor (Earthquake) and Adam Slivers (SEAW Board member) at the Seattle happy hour, and Paul Brallier (Disaster preparedness) and Scott Douglas (Wind advisory) at the Eastside happy hour, to talk about their committees and how younger engineers can get involved within SEAW. By coming, you can also find out if the committees you want to join allow you to watch remotely, allowing you to listen to a meeting if distance or the timing of a meeting does not work with your schedule.

If you want to join a committee but are unsure about which one, come to a happy hour first and see what each one is all about.

If you would like to get updates about the YMF events and are not on the current email list, please email seawymf@gmail.com and we will be sure to get you on it. We are currently working on planning some of the events for next year, and will be sending out emails about them as they get closer.

Here's our schedule through the end of the year:

Wednesday, November 12
Metropolitan Grill, Seattle
Ardel Jala of the SEAW Education Committee will be in attendance.

Wednesday, December 10
The Yard House, Seattle
Kyle Steuck of the SEAW Sustainability Committee will be in attendance.

YMF Leadership Contact Information

President:
Eric Pope
epope@dci-engineers.com

Vice President:
Tyler Winkley
twinkley@dci-engineers.com

Outreach Representative:
Natalie Aguilar-Carranza
naguilar@id-engr.com

Social Representative:
Morgan Wiese
mwiese@integrusarch.com

Past Chair:
Tyler Kurz
tkurz@dci-engineers.com

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.

The SEAW Seattle Chapter *Equilibrium* is published monthly from September through June and is available online at www.seaw.org. Articles, letters, and announcements are accepted by e-mail to seaw@seaw.org.

Advertising rates (prepaid) Help Wanted/Job wanted, max 200 words, $65; Display ads: Quarter page, $115; Half Page, $150; Full Page $190. 10% discount for ads running two or more months. Deadline is the 20th of the month. Contact SEAW for an advertising order form.

Engineer's Notes from Afield

-by Darrell Staaleson

My Mother wanted to explore Friday Harbor. My wife is not really a traveler, so I took a few days off to go along myself.

We went to the Whale Museum in Friday Harbor and learned about cetacean biology, the orca, and Salish myths. Thereafter, we went whale watching all day on a charter boat. We got to see 150 white-striped dolphins riding the bow wave and our wake. It was an awesome sight. We watched a minke whale and sea lions. To our great amazement, we got to watch the L-Pod of orcas. We listened to them vocalizing while the ship's naturalists taught us how to recognize the various Orcas in the pod. They explained orca biology and the ecology of Puget Sound—I mean, the Salish Sea.

They explained the primary reasons for decline of the Orcas: decline of the Chinook salmon and the loss of all their young in the 1980's. The Chinook salmon decline is known to be the result of damming of rivers and destruction of stream habitat. The loss of their young resulted from "taking" for exhibition at theme parks.

Traci Walter is a naturalist and one of our guides on our magnificent whale watching tour. Below is a picture taken on the day of our Tour of L72 "Racer"—Traci's favorite—doing a "spyhop". And yes, I think she can identify them all.

Photo by Traci Walter Photography

The Elwha River Watershed was once one of the most productive salmon hatcheries in Puget Sound.

> "The river was considered the most prolific fish producer on the Olympic Peninsula. It was particularly known for its very large Chinook salmon, weighing as much as 45 kilograms (99 lb).[1] Prior to the construction of the two dams on the river in the early 20th century, an estimated 392,000 fish returned annually to spawn. By the late 20th century the number had declined to less than 3,000."[2]

The Elwha Dam was fully removed and the Elwha River flowed freely by March 2012. As of 2014 biologists are seeing substantial improvements in the salmon and steelhead populations and the regeneration of the upstream habitat. As for the orca that were taken as calves, only one is known to be still alive.

There is hope for our resident orca pods. A baby orca was born this summer - the first in many years. With the restoration of salmon habitat on the Elwha River and around Puget Sound, the primary food source of the orca may begin to recover.

As a civil engineer, I believe that we are a part of building a better world. But on this tour I was confronted with the effects of the irresponsible use of technology which is threatening our ecology in the Pacific Northwest and throughout the world. As Dr. Malcom said in Jurassic Park, "Your scientists were so busy trying to figure out "IF" they could do something, that they forgot the think of whether they "SHOULD."

I think with some foresight, a little planning, knowledge, and a moderate budget we can restore the Puget Sound Ecology. We don't need to become "LA." That is a sad world view without vision. In my view, we can have the Puget Sound 'green' with rivers and trees and salmon and water while having a vibrant and prosperous community. These are not exclusive objectives. Of course, this could mean that the squirrels might chew through your screen door and raid your kitchen. Or raid your apple trees before you harvest. It is a constant struggle. Better that than living in a concrete jungle.

My Mother Marylen and I share an ice cream cone after a day of whale watching on the Salish Sea.

My mother is in her late 70s, has an arthritic foot, and needs a cane to walk safely. As The pirate code teaches us, "Thems that falls behind, gets left behind." So, for those of you who might want come along with us, please try to keep up!

Footnotes:

[1] "Restoration of the Elwha River Ecosystem". United States Fish and Wildlife Service. Retrieved 6 August 2011.

[2] "Elwha River Salmonid Assessment: Adult Weir Project. 2010 ANNUAL REPORT". Washington Department of Fish & Wildlife. Retrieved 6 August 2011.

Committee Corner

Existing Building Committee
Thursday, November 13, 12:00–1:15 PM
Coughlin Porter Lundeen,
801 2nd Ave Ste 900, Seattle
GoToMeeting access available
Topic: General committee work, ASCE 41-13 learning opportunities and example problems
Contact: Bryan Zagers, bryanz@cplinc.com

Wind Engineering Committee
Next Meeting: Thursday November 13 from 12:00 to 1:30 at DCI Engineers, 818 Stewart Street, Ste. 1000, downtown Seattle. In addition to an update on wind related code development for the 2015 UBC and ASCE 7-16 the WEC will focus on approaches to addressing Exposure D in the Puget Sound Area, expansion of Kzt maps for other jurisdictions, and wind design for roof-top equipment, mechanical screens, and parapets. All members are encouraged to participate either in person or via GoToMeeting. Please contact the WEC chair, Scott Douglas sdouglasscott@gmail.com, to join the WEC and receive information for remote log-in information for meetings.

SEAW/WABO Liaison Committee
Next Meeting: Thursday, November 13, 11:30–1:00
Bellevue City Hall - 450 110th Ave NE, Bellevue
Topic: Heavy Vehicle Loads white paper
Contact: Charlie Griffes, charlie@ctengineering.com

Public Information Committee
Next Meeting: On or about November 15, in the afternoon
Location: GoToMeeting
Topics: Develop a forum for committee communications
Contact chair Darrell Staaleson, dstaal@staaleng.com, 253.520.0388, for information and GoToMeeting details.

Disaster Preparedness and Response
Next Meeting: Tuesday, November 18, 12:00–1:00 PM.
Quantum Consulting Engineers, 1511 Third Ave Ste 323, Seattle
Topics: Statewide volunteer program update, Cascadia Rising 2016 Functional Exercise update, review of volunteer liability protection under the Good Sam legislation, upcoming demonstration of WAserve registration and deployment database, reconnaissance trip expense guidelines. ATC-20/SAP classes. Newcomers welcome! BYOL (We meet on the third Tuesdays)
Contact: Joyce Lem, joyce.lem@hdrinc.com, 425.450.6345

Education Committee
Next Meeting: TBD–watch the SEAW website for details.
Seattle Municipal Tower, 700 Fifth Ave Room 1860
GoToMeeting available
Topics: SEA NW Conference recap, Ideas for 2015 Spring Seminar.
Contact: Ardel Jala, ardel.jala@seattle.gov

Sustainability Committee: Kyle Steuck, chair
Next Meeting: Wednesday, November 19, 2014, 12:00 – 1:00 PM at KPFF, 1601 Fifth Ave N, Fourth Floor Conference Room
Topic: Thermal Bridging in the Building Envelope–the Structural Engineer's Perspective
Contact: Kyle Steuck, Chair
ksteuck@degenkolb.com, 206.262.9240

Earthquake Engineering Committee, Andy Taylor, chair
Next Meeting: Tues, January 6, 2015
This is the bi-monthly meeting of the SEAW Earthquake Engineering Committee (EEC). We meet in the Fourth Floor Conference Room of the Westlake Center Office Tower, 1601 5th Ave, Seattle.

The meeting agenda will be e-mailed to all EEC members a few days before the meeting. All SEAW members are welcome to attend. Bring your own lunch; waters and sodas will be provided. Remote connection via speaker phone and WebEx connection to projected images will be available. Please e-mail the EEC Chair, Andy Taylor, andy.taylor@kpff.com, if you would like to receive information about the agenda and remote connection.

Legislative Committee
Weekly Meetings Starting Jan 2015
Location: Call in/Olympia & Bellevue
Topic: Bills in the current Legislative Session
Contact: Tim Nordstrom, timn@starseismic.net

SEAW Committee Chairs

Building Engineering	Chris Duvall	chrisd@cplinc.com
Code Advisory	John Hooper	jhooper@mka.com
Committee Liaison Task Group	Tom Corcoran	tcorcoran@integrusarch.com
Disaster Prep/Response	Joyce Lem	joyce.lem@hdrinc.com
Earthquake Engineering	Andy Taylor	andy.taylor@kpff.com
Education	Ardel Jala	ardel.jala@seattle.gov
Existing Buildings	Bryan Zagers	bryanz@cplinc.com
Legislative	Tim Nordstrom	timn@starseismic.net
Professional Practices	John Tawresey	johntaw@aol.com
Public Information	Darrell Staaleson	dstaal@staaleng.com
Scholarship	Kevin Solberg	kms@mka.com
Snow Load Engineering	Open	
Strategic Plan Monitor	Jill Shuttleworth	jtshuttleworth@meierinc.com
Sustainability	Kyle Steuck	ksteuck@degenkolb.com
Technology	Lynnell Brunswig	seaw@seaw.org
Western Council	Ed Huston	huston@smithhustoninc.com
Wind Engineering	Scott Douglas	sdouglasscott@gmail.com

Liaisons/Representatives:

PSEC	Peter Opsahl	popsahl@lundopsahl.com
NCSEA	Chun Lau	clau@comcast.net
BSSC	Tom Xia	txia@dci-engineers.com
SEAW/WABO	Charlie Griffes	charlie@ctengineering.com
Structural Engineers Foundation	David Peden	peden@coffman.com
WA Seismic Safety Committee	Stacy Bartoletti	sbartoletti@degenkolb.com

Meetings, Seminars and Announcements

Future City Competition

Future City is a powerful tool educators can use to strengthens students' 21st century skills, teach them citizenship, motivate them to study math and science, and expose them to potential careers.

We need your help to extend the impact of Future City. We want to increase the number of students, mentors, and volunteers participating in this transformative program. Here are some quick and easy things you can do help us spread the word about Future City.

Introduce schools and out-of-school-time groups to Future City:

- Send an introductory email along with the Future City Form a Team pdf to principals, science and technology supervisors, teachers, and out-of-school time leaders.
- Post announcements in newsletter, blogs, Facebook pages.
- Host a workshop at a conference.
- Invite the FC Coordinator or a FC Educator to existing meeting with potential educators.

Mentors

Make a meaningful difference by advising a FC team for just 1 to 2 hours a week.

Judges

Get a front row seat and meet and interact with tomorrow's innovators.

Regional Competition Day is Saturday, January 24, 2015.

NEW VENUE THIS YEAR–DigiPen Campus: 9931 Willows Rd, Redmond, WA

Volunteers

Help with competition day or become part of the volunteer organizing committee.

For more information Visit:
http://futurecity.org/washington
Email:
karen.pavletich@washingtonfuturecity.org

Find us on Facebook:
https://www.facebook.com/wafuturecity

Register today for AIA Seattle's Getting to Zero series.

This innovative four-part series will focus on leading participants through the next target of the 2030 Challenge—70% reduction—and beyond. Through case studies, presentations, and panel discussions, participants will explore cross-cutting themes in making the case for net zero energy building, technical "how to's" and cross-disciplinary approaches essential in net zero energy building from initial idea all the way to the occupant experience.

KEY SESSION DATES

Nov 7—Market Realities & The Value Proposition for Net Zero Energy Buildings

Dec 5—Integrated Design & Process for Net Zero Energy Buildings

Jan 9—Building & Operating Net Zero Energy Buildings

Feb 6—Long-Term Operations for Net Zero Energy Buildings

All sessions will take place at Seattle City Hall, 8:30 am - 1:00 pm.

Space is limited. For registration and information, visit aiaseattle.org/GettingToZero

COSMOS Technical Session

Developing Site-Specific Ground Motions to Satisfy the New Chapter 16 of ASCE 7-2016 which Codifies the West Coast Tall Building Seismic Analysis Requirements

The Consortium of Organization for Strong Motion Observation Systems (COSMOS) will be holding its Annual Meeting and Technical Session at the Crowne Plaza Hotel San Francisco Airport in Burlingame, California on Friday, November 14th. The Crowne Plaza SFO is conveniently located at 1177 Airport Boulevard one block east of the 101 Freeway. The Crowne Plaza has a complimentary shuttle (runs every 30 minutes) from San Francisco Airport. For those coming by BART, the shuttle stop is located in front of the International Terminal upper level adjacent to the SFO BART Station. The airport shuttle is available on their website. This year's Technical Session is again being co-sponsored by the Pacific Earthquake Engineering Center (PEER) and the California Geological Survey (CGS). Registration for the Technical Session will begin at 7:30 am (with coffee and pastries). The Technical Session will begin promptly at 8:30 am and with a lunch break at noon. The COSMOS annual meeting will start at 12:30 pm and adjourn at 1:00 pm. The Technical Session will then reconvene and end at 5:00 pm. As in previous years, it will then be followed by a no-host cocktail hour.

This year's technical session will primarily focus on the development of site-specific ground motions that satisfy the new requirements of brand new Chapters 16 and 19 of ASCE 7-16 which are finalizing development. Many of these requirements are somewhat vague in the areas of selection, scaling and orientation of ground motions in both the near and far fields. The Chapter 16 codifies requirements for non-linear response history analysis and codifies tall building analysis requirements that are currently being used for tall buildings on the west coast. Chapter 19 codifies new requirements for soil structure interaction and base slab averaging that also be used by engineers to reduce seismic demands. The goal for this session is to have the authors of these chapters explain the intent of the requirements and how they were expecting the ground motions to be developed and applied. Other areas that will be discussed include site specific max direction factors, site coefficients and vertical direction ground motions. Speakers on these subjects include Curt Haselton, Jack Baker, Norm Abrahamson, Jon Stewart, Yousef Borzognia, Ron Hamburger, C.B. Crouse and John Hooper. As in years past, the last part of the Technical Session will include a lively panel session which will allow a forum for discussion.

Registration fees are $ 200 for COSMOS and PEER members and $ 240 for non-members that includes both lunch and refreshments. There is also a special reduced student rate of $ 40. Program details for the COSMOS Annual Meeting and Technical Session are available at the COSMOS website at www.cosmos-eq.org .

Call for Abstract or Full Session Proposal:

2nd ATC-SEI Conference on Improving the Seismic Performance of Existing Buildings and Other Structures

Due Date: January 22, 2015

The ATC-SEI Conference Program Committee is seeking dynamic sessions and abstracts on new information on the seismic evaluation and seismic retrofit of existing buildings, including:

- case studies
- new discoveries
- innovative use of new technologies
- materials
- implementation issues
- improvements to existing standards
- socio-economic issues

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Meetings, Seminars and Announcements, cont'd

(Continued from page 8)

The goal of the Conference is to provide an opportunity to advance the understanding of the tools, techniques, and innovations available to assist the attendees in meeting the challenges of seismic evaluation and retrofit.

Who should submit a session proposal/ abstract?

We encourage submissions from practitioners, educators, researchers, code developers, civil engineers, structural engineers, building designers, firm owners, codes and standards developers, and others.

NOTE: Final papers are optional; submitted papers will not be peer-reviewed, but will be included in the Conference proceedings. All Presenters are required to register and attend the Conference.

Visit the ATC-SEI Conference Website, www.atc-sei.org, for details about abstract and session proposal submissions.

This Conference is organized by the Applied Technology Council, 201 Redwood Shores Parkway, Suite 240, Redwood City, California 94065 and the Structural Engineering Institute of ASCE, 1801 Alexander Bell Drive, Reston, Virginia 20191.

Employment Opportunities

Unique Opportunity With Successful Architectural Firm

A prominent architectural firm is seeking a motivated leader with entrepreneurial spirit to establish and lead a structural engineering practice within the office. The successful candidate will provide in-house structural design services to architects, and conduct business development outreach to supplement workload as needed. Must be an out-of-the box thinker and must bring established industry connections.

Qualifications

Professional Registration and SE designation is required. 8-10 years of experience in commercial and residential design with a variety of structural types, i.e. wood, steel, and concrete. Detailed understanding of building codes a must. Extensive knowledge of all aspects of professional services from contract negotiation through project close out including construction observation.

Project Related Duties

In addition to a management role, the candidate will be responsible for building system concepts and documentation processes. Prepare and document required code research, participate in development of the project cost model and design to it. Interface with all team members and clients. Document interpretation and submittal reviews during bidding and construction administration.

Please provide resume with work samples to bainbridgearchitect@gmail.com

Structural Staff Engineer

Integrus Architecture is searching for a Professional Engineer to be part of our Seattle team. This is a unique opportunity for the right individual to join a team of professionals who are committed to creating architecture that engages with the community it serves in a meaningful way.

In support of the Seattle Integrus team, the successful candidate will meet the following requirements:

- Bachelor of Science in Civil Engineering with emphasis in structural engineering or Masters (preferred).
- Licensed as a Professional Engineer with four to six years of working with building structures.
- Computer proficiency is required. The candidate must be familiar with engineering software applications such as RAM, ETABS, and RISA 3D with REVIT Structural experience a plus.
- Ability to meet deadlines and complete assignments.
- Commitment to customer service and ability to work in a team-oriented environment.
- Excellent written and verbal communication skills in English.

The successful candidate will conduct structural analysis and design of steel, concrete, masonry and wood building structures using governing codes including construction administration under the direction of the Principal Engineer. This position offers an excellent opportunity to develop strong technical and communication skills while working with the design team on a variety of interesting and challenging projects. The successful candidate will have opportunities for professional development and community involvement. Responsibilities will be escalated with increasing experience level with the goal of Structural Engineering licensure. Salary is dependent on experience.

We are an Equal Opportunity Employer and offer competitive compensation and benefits including a 401(k) retirement plan, medical and dental insurance, long term disability insurance, life insurance, and an FSA plan.

To apply for this position, submit a cover letter (including salary expectations) and a resume through our website at www.integrusarch.com *(CLICK – about | careers | join us | Seattle Office | submit resume)*

Opportunities for Mid-level Design Engineer and Senior Project Manager:

Seattle Structural is a downtown Seattle firm looking for qualified professionals to join our talented group practicing across a number of different industries. Seattle Structural offers an excellent opportunity to work on a variety of public and private institutional, healthcare, educational, and commercial projects both domestically and internationally. We offer a competitive salary and a relaxed, collaborative work environment. Benefits include medical, transit reimbursement, and retirement matching. Seattle Structural is a firm that makes it easy to become personally invested in the achievements of your company.

Seattle Structural is an Equal Opportunity Employer.

We are filling two positions. Candidates must meet the following requirements:

- Mid-level Designer: 5+ years' experience.
- Senior Project Manager: 10+ years' experience.

- BS or MS in Structural, Civil/Structural, or Architectural Engineering.
- Experience in steel and concrete buildings, lateral analysis, deep foundations, and marine projects are desired.
- Working knowledge of CAD and Revit preferred.
- Strong emphasis on client service.
- Excellent communication skills.
- Strong technical skills.

Please address inquiries to:

Howard Burton, President
Seattle Structural PS Inc.
1420 Fifth Avenue, Suite 425
Seattle, WA 98101
HBurton@SeattleStructural.com

STRUCTURAL ENGINEERS ASSOCIATION of WASHINGTON • Seattle Chapter

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Seattle Chapter Committees & Chairs

House/Program	Ted Smith
Refresher Course	Mark Moorleghen
Newsletter	Lynnell Brunswig
Engineer of the Year	Ed Huston
Committee Liaison	Tom Corcoran
YMF	Eric Pope
ASCE Liaison	Ed Huston
PSEC Representative	Peter Opsahl

Statewide Committees & Chairs

Code Advisory	John Hooper	Legislation	Tim Nordstrom
Earthquake Engineering	Andy Taylor	Education	Ardel Jala
Building Engineering	Chris Duvall	Finance & Auditing	Ted Smith
Existing Buildings	Bryan Zagers	Disaster Prep/Response	Joyce Lem
Professional Practices	John Tawresey	Public Information	Darrell Staaleson
Wind Engineering	Scott Douglas	Sustainability	Kyle Steuck
Scholarship	Kevin Solberg	Snow Load	Open

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

Statewide 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.

David Cleary
Seattle Chapter Student
Cal Poly San Luis Obispo
BS Civil Engineering 2004
UW Seattle, MS Structural Engineering

Emily Cronin
Spokane Chapter Associat
Coffman Engineers
Gonzaga Univ., BSCE May 2014
EIT, Washington

Caleb Erb
Spokane Chapter Associate
TD&H Engineering
Gonzaga University BSCE/2014
EIT, Washington

Brad Johnson
Seattle Chapter Member SE
R2 Resource Consultants
University of Washington, BSCE June 2013
Licensed SE, WA

Jason Lindquist
Seattle Chapter Member S
Equilibria Structural Engineering Inc PS
Univ. of Washington, BSCE, 2003
SE, Washington

Sara Loftus
Spokane Chapter Student
Washington State University
BSCE, 2013, MSCE 2015
EIT, Washington

Dionisio Muyco
South Central Chapter Member PE
Three Rivers Engineering,L
Heald Engineering College, BSCE/April 1968
PE, Washington, California

Joey Piotrowski
Southwest Chapter Associate
Puget Sound Naval Shipyard
Washington State University, BSCE 2010, MSCE 2012
EIT, Washington

Daniel Rich
Southwest Chapter Associate
PMA Engineering
Univ. of Queensland, Australia
Bachelor of Engineering, Extended Major in Civil Engineering

Dirk Rogstad
Seattle Chapter Associate
CG Engineering
WSU, BSCE 2012
EIT, WA

James Rutherford
Seattle Chapter Member PE
Hatch Assoc. Consultants Inc.
Cornell Unive., BSCE, 1976
Licensed PE, WA, OR, AK

(Christian) Todd St. George
Seattle Chapter Member SE
WJA Design Collaborative, PLLC
UW, BSCE 1993, MSCE 1995
Licensed SE, WA

David Terry
Seattle Chapter Student
UW, BSCE 2012
MSCE - Structural 2014
EIT, WA

Haishan Wu
Seattle Chapter Student
UW, BS June 2013
WSU, MS expected Dec 2014
EIT, WA

SEAW Calendar

NOVEMBER, 2014

*******		Deadline for Lifetime Service Award nominations
Saturday	1st	Student Competition at UW Research Lab contact Eduardo Avelar 916.376.2829
Wednesday	12th	YMF Happy Hour 5:00 – 7:00 PM Metropolitan Grill, Seattle
Friday	14th	State Board meeting (rescheduled due to Thanksgiving)
Tuesday	18th	Seattle Chapter Board & Dinner meeting Hotel Monaco
Thursday	20th	December Newsletter deadline
Thursday	27th	THANKSGIVING