September | 2019

STATE EQUILIBRIUM

Newsletter of the
Structural Engineers Association of Washington

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State Leadership

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In the Issue

Seattle Chapter Meeting

Engineering Standard of Care

Details:

Date: Tuesday, September 24, 2019
Time: 3:00 - 8:15 PM

Location: Hotel Monaco
1101 Fourth Avenue, Seattle, WA 98101
Click here for directions.

Registration Fees:

Early Bird Members - $40*
Non-Members, & Guests - $50
YMG - $40
Students - $20

Agenda:

5:00 - 6:00 pm Registration/Networking
5:15 - 6:00 pm Tech Talk presented by: **Bracelok**
6:00 - 6:30 pm Dinner
6:50 - 7:00 pm Welcome/Announcements
7:00 - 8:15 pm Program

Professional standard of care is a benchmark for professional services, determining when engineers have met their contractual and professional obligations. What is meant by professional standard of care?

Matthew Copus of Hall and Company (a provider of professional liability insurance) and Tom Owens of Mendel Owens (a Seattle law firm representing design professionals) will give us their take on the

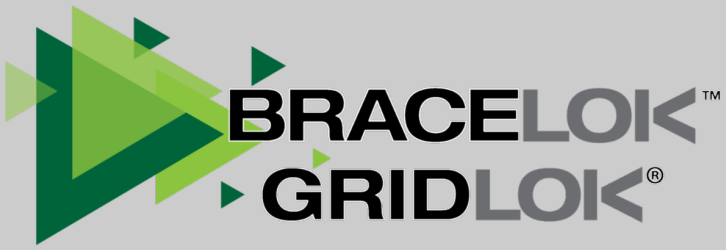
subject.

Tech Talk: Bryce Hodgson of Bracelok (Bracelok.com) will talk about their ICC-approved solutions for bracing suspended ceilings, interior partitions and partial height walls in seismic zones.

See Speaker Bio's Below

Register Today

Sponsored By:



Seattle Chapter Meeting Speakers

Matthew Copus CIC CRM
Senior Associate / Hall & Company

Matthew is a Senior Associate for Hall & Company, an insurance broker firm that specializes in the placement of professional liability insurance for design firms and consultants. Matthew has been serving as an insurance broker and risk manager for AE firms, Land Surveyors, and Environmental Consultants since November of 1998. He is a certified insurance counselor as well as a certified risk manager. These professional designations are marks of distinction that represent robust commitment to professional excellence and leadership within the insurance industry.

Tom Owens, J.D.
Partner / Mendel Owens

Tom has been representing clients for over 20 years. He is a construction and business lawyer with a strong background in design professional law and contract negotiation with a passion to help his clients build their businesses and negotiate good deals. Tom was an independent businessperson – an electrical contractor – in the construction industry before he went to law school. Tom began a private practice representing construction owners and small businesses. He became General Counsel for a major multinational architecture firm early in his career. After 13 years with the architecture firm, Tom transitioned back to private practice. His clients are predominately design professionals and independent business people or their companies.

June Dinner Meeting Recap

By Sean Augustino

This past end-of-year social was a bit of a changeup as we expanded outside the strictly structural realm to a new topic that could have a large impact on our community.

But before the main event could start, we took some time to celebrate all that has happened with SEAW over the past year, with a sunset over Lake Union in the background. We handed out awards (see “2019 Engineers of the Year: Paul Brallier & Joyce Lem”), heard updates from the Education

Committee and YMG (who is nominated again as a finalist for YMG of the Year), raffled off vendor prizes, and handed out a record $16,000 in scholarships to four deserving students (see “2019 SEAW Scholarship Recipients”). The night would end with the President’s Awards, and Chapter President Darrell Staaleson handing over the gavel to his successor Mike Bramhall.

Mike Bramhall receiving the President’s Gavel from Darrell Staaleson

The big attraction was a presentation by Rex Hohlbein of the local nonprofit Facing Homelessness on one of their major initiatives, the Block Project. The Block Project is an effort by Facing Homelessness and their sister organization, Block Architects, to build tiny homes that house displaced citizens in Seattle’s backyards. The concept is simple: a willing Seattle resident discusses with their neighbors if they would like to step up and house someone experiencing homelessness in their backyard. If the whole block agrees, the resident offers their backyard as a site for a tiny home. Facing Homelessness then screens applicants who could live in the home, and partners them with the most suitable resident. Both parties sign an agreement with ground rules, and if all goes well, the new resident will have a step up toward leaving homelessness for good. The whole community should be involved in this person’s journey, not just the homeowner.

Rex Hohlbein starting his presentation

Rex himself had a long journey to be in his position, and he shared with us a few important things he has learned along the way by working with those experiencing homelessness. The most enlightening to me were:

- Homelessness is not just a problem for those who are homeless. It is a problem for the whole community.
- To start solving homelessness, focus on the person, not the problem.
- Start with a single step. You may not be able to do anything for thousands, but you can for one.
- The biggest thing missing for most experiencing homelessness is relationships.
- Even a simple “hello” can have an impact.
- Interacting with strangers on the street can be scary. Be ready to step out of your comfort zone, but take it at your own pace.
- Know your own perspective and what judgments and biases you may hold.

So far, the Block Project has shown many signs of success. They have a couple homes with residents moved in, and several more on the way. Homeowners and Block Home residents have been very happy with their pairings. The homes are also designed to be sustainable and completely off-grid. There have been many hours and dollars donated from the A/E/C community to make this happen, and both firms and individuals in these industries (including SEAW members) will still have opportunities to help. The long-term goal is that Block Home residents will be able to start paying rent, funding eager residents to build the next homes, thus creating a self-sustaining model. In this way, Rex and his colleagues are hoping to slowly chip away at Seattle’s seemingly intractable crisis. Facing Homelessness also has several other initiatives, for more information, visit their website at https://www.facinghomelessness.org/programs. It is not often our industry is so directly approached to make a difference in the broader community, and what better way to ask structural engineers to solve problems than through building! For more information on the Block Project, to donate, or get involved, visit http://the-block-project.org/home. And of course, remember to Just Say Hello!

Thanks to Rex, Facing Homelessness, Lake Union Café, and all who attended. We are looking forward to another exciting year ahead!

SEAW State Board of Trustees - Incoming President's Message

By Darrell Staaleson

September 9, 2019

When I accepted the nomination for the leadership track for SEAW, I decided to work on improving my leadership skills by reading, “Theodore Roosevelt on Leadership: Executive lessons from the Bully Pulpit,” by James Strock. I wanted to give my best effort in serving our profession here in the State of Washington.
What I learned from TR, Teddy Roosevelt - I call him TR now, comes down to one sentence. “Example is the most potent of all things.” And you do that by, “Riding the horse!”

Last year at the 2018 NW Conference held in Richland, WA, we listened to a presentation by the National Parks Service on the Manhattan Project and Hanford sites and then we went on an awesome technical tour of the Hanford ‘B’ Reactor in Richland, WA.

Darrell Staaleson at Operations Control at the Hanford ‘B’ Reactor Tour. AUG 2018.

At the social before the keynote dinner presentation, I noticed an older gentleman in a Park Ranger uniform sitting alone at the head table. So, I went over to the man sitting there and asked, "Are you are speaker?" He nodded. I was a little embarrassed that no one had welcomed our speaker or offered him dinner or sat down and spoken with him. All the other leaders were swamped and busy and this was not my chapter. But still, this needed to be dealt with. As a Chapter President I did not need to wait for anyone to tell me there is a need or give me permission. If not now, then, “when?” If not me, then, “who?”
So, I asked, "Have you eaten?" He said, "Well, there is a huge line." To which I replied, "Not for me. So, come on. Let's get you something to eat." I invoked presidential privilege, cut into the front of the line and got our speaker some dinner. When I cut in, I said, "Our speaker needs dinner. We don't want to listen to a presentation from a man who is hungry. Needs must!" And because I owned the rightness of my action and was acting for the group instead of for myself, those in line accepted and understood.
Our speaker was quite happy to get some dinner and a glass of wine. We sat down to eat. As we enjoyed our dinner, Tom Young of the Masonry Society and a few others came to sit with us at our table. Everyone listened intently for the next 30 minutes as we were treated to our own personal lecture from a US National Parks Ranger who specialized in the Manhattan Project sites and had worked a career in the nuclear industry. What started as an awkward social gaffe, turned into a really enjoyable and interesting dinner conversation.
That is what it means to "Ride the Horse." And that is what leadership is.
So, what do you get out of being a part of SEAW? You not only learn what leadership is, but you get to practice using those skills. It is not all "Peaches in Georgia." But nothing worth doing is easy. You must use vital force with consistency, mental discipline, and exercise of will to stay on mission. I have found these skills have helped me improve my business in developing relationships with clients, working with contractors, dealing with problems, and getting projects done. These are also the skills that employers want in the engineers they hire.

Vision for this year
This year we will be focusing on streamlining the policies and procedures in our association. This includes leadership training, commemorating the history and organization of our association, making committee communications more effective through the use Basecamp and committee webpages, and reworking our by-laws. I expect these improvements to allow our committees to operate with a better focus on their work by shifting the administration to our executive director. This will complete the work of transitioning to our new executive director which was worked on by Past President Chun Lau and immediate Past President, Siri Ashworth.
Based on that, we have a great year ahead.

It is my honor to serve as your State President for this coming term.
Darrell Staaleson

SEFW Announces Fall Forum & Scholarship Awards

By Angela Gottula Twining

The Structural Engineers Foundation of Washington has had an exciting summer and is looking forward to the fall!

- **SEAW Scholarship Program**: In June, $16,000 in scholarships were presented as part of the SEAW Scholarship Program. SEAW and SEFW co-presented these awards, which are funded by SEFW with SEAW contributions, corporate donations, and individual donations. Tom Corcoran, chair of SEFW, and Darrell Staaleson, current president of the SEAW State Board of Trustees, presented the awards to four Washington young women. Since 1985, SEAW has awarded $180,000+ to 73 Washington students, and SEFW has been funding the awards since

2011.

Recognizing Carolyn McCann, one of our scholarship recipients, at the Spring Social

- **YMG NW Conference Scholarship**: Additionally, SEFW provided its first scholarship to a younger SEAW member to attend the Northwest Conference in Gleneden Beach, Oregon. The SEAW Board of Trustees nominated John Gunn of Coffman Engineers to attend, and SEFW contributed to his expenses to attend the event. SEFW intends to continue conference scholarships for younger SEAW members in the future, as part of the "scholarship" arm of its mission. John remarked of the experience, "I had a great time at the Northwest Conference! It was the first conference I attended, and I learned a lot -- from changes in ASCE 7-16 to new research about structural glass. Although the hotel lost power briefly, it did not stop structural engineers from four states and British Columbia from spending quality time together. I am very grateful SEFW and Coffman Engineers were generous enough to sponsor my attendance." Congrats John!

John Gunn in his conference gear

- **Fall Forum, November 6**: SEFW is excited to announce details of its 9th Annual Fall Forum, being held at Benaroya Hall on Wednesday, November 6, 2019. This year's discussion, "Worldwide Trends in Urban Growth: How Washington Stacks Up," will be presented by Antony Wood, CEO of the Council on Tall Buildings and Urban Habitat. Dr. Wood has visited more than 80 countries and will share his overall observations on global building development, plus some commentary on our local area, including Washington's largest cities. Be on the lookout for corporate sponsorship invitations and individual donation opportunities.

Dr. Antony Wood

- **Special Wind Region Study:** SEAW has partnered with the Structural Engineers Association of Oregon (SEAO) to sponsor a study that will determine specific design wind speeds and boundaries in the Special Wind Regions specified in ASCE Section 26.5.2. Currently, wind speeds adopted by local jurisdictions are best guess estimates based on little data. Wind engineering firm CPP will perform the study, which is expected to result in lower values that will become part of the local codes. Grants, as well as corporate, industry, and individual contributions, will be required to fund the study, which will cost SEAW around $25,000. All donations will be tax deductible and facilitated by SEFW at https://sefw.org/donate.html. This effort will benefit Washington's structural engineers for years to come!

- **Congrats Tom!:** SEFW has been led by Tom Corcoran of Integrus Architecture for the last several years, and has recently learned that Tom is receiving a distinguished alumni award from his alma mater, the South Dakota School of Mines & Technology. Tom is receiving the award because of his career accomplishments and his work in the profession, including his leadership of SEFW. Thank you, Tom, for what you have done for SEFW, and congratulations!

Interested in Bellevue's New Fire and Building Codes?

By Ken Carlson

The State of Washington will be adopting the 2018 International Building & Fire Codes on July 1, 2020. Building Division and Fire Department staff will be hosting three stakeholder workshops to provide information regarding the code adoption process, to highlight significant code changes at the national, state and local levels and to collect your input on potential changes to our adopted Building & Fire Codes that you believe we should consider.

The workshops will be held at the Bellevue Botanical Gardens, 12001 Main Street, Classroom C, from 1 p.m.- 4 p.m. on:

- September 12
- October 10
- November 21

Please join us for one of these workshops to learn more about the upcoming code changes and provide your input. If you are unable to attend one of the workshops, you can submit feedback by emailing 2018ICodes@Bellevuewa.gov.

NW Conference Article - My First Conference

By John Gunn

I had the pleasure of attending the 2019 Northwest Conference thanks to the generous sponsorship of SEFW and my employer, Coffman Engineers. As it was my first conference ever, I learned quite a bit even before listening to the presentations. Darrell and his wife kindly gave me a ride to Gleneden Beach, Oregon, and I enjoyed getting to know them better during the long drive.
Once at Salishan Resort, Darrell invited me to attend the NW Conference Board Meeting, where I learned of the many challenges which had to be overcome in order to put on the conference. Our first dinner featured magician Hart Keene, who effectively applied his unique brand of illusion and mentalism to a room full of structural engineers and their guests. He had everyone laughing and managed to dazzle a few skeptics. Unfortunately, the hotel lost power the next morning, forcing a few presenters to go without their PowerPoint slides. But networking continued unimpeded, and I had good discussions with Jim Farley, John Tate, and as many vendors as I could. I even won a Contech baseball cap in the raffle. The water gun competition was moved up to the take place after Friday's BBQ dinner, which once again included delicious local salmon.
I rode back to Seattle bright and early Saturday morning with Scott Douglas, preferring to return home rather than stay for the golf tournament. Like Darrell, Scott shared a few interesting stories with me while on the road.
A special thank you to the NW Conference Board, SEAO, SEAW, SEFW, Coffman Engineers, Kevin McCormick, Darrell Staaleson, Arvind Nerurkar, and Scott Douglas.
My technical notes for five of the presentations are below. I have tried to avoid duplicating notes from Darrell's article "Notes from the Northwest Conference, Oregon". The presentation slides are accessible on SEAW's website through the "Resources" tab.

How to Design for Tsunami: The New ASCE 7-16 Tsunami Provisions and Project Examples (Seth Thomas)

- Historical records do not provide a sufficient measure of the potential heights of future tsunamis
- Use probabilistic hazard analysis similar to seismic
- New chapter 6
- Required for RC III and IV buildings in the Tsunami Design Zone
- Maximum Considered Tsunami is the design basis event
- Water flow depth and velocity based on runup elevation found on online Geodatabase, free, enter address and cut section of coast
- Hydrostatic and hydrodynamic forces, scour, uplift, debris impact and damming
- Tsunami primarily influenced by seismic fault slip distance
- Can use either energy grade line analysis or site-specific study to determine flow depth and velocity from runup elevation
- Proximity to large debris considered within 45 degrees
- Increased density of water
- If VTsu < 0.75Ω0Eh, system is adequate
- Vertical evacuation structures, Ocosta Elementary School

A Summary of Significant Updates in ASCE 41-17 (Garrett Hagan)

- Seismic Isolation and Supplemental Energy Dissipation now separate chapters
- Relaxed some component-level requirements for collapse prevention performance level
- Non-structural performance levels required decreased, new hazards reduced level for BSE-2E
- Basic performance objectives, check BSE-2E instead of BSE-1E, check both for RC IV
- BPOE vs BPON
- Force-controlled components, added 1.3 margin of safety for Life Safety level
- Non-linear analysis, 11 earthquake records needed for site-specific response spectra
- Steel columns, simpler and more generous criteria, m-factors reduced by axial force
- Concrete columns, simpler m-factor determination
- Reduced required anchor testing
- 0.9 Shear strength reduction for 2" wood framing

PCI Design Handbook 8th Edition – Content and Updates (Jared Brewe)

- New appendices

1. Blast-resistant design, from manual
2. Design for Structural Integrity and Disproportionate Collapse, wall-to-diaphragm connections
3. DSDM Provisions of ASCE 7-16, diaphragm

- New storm shelter section
- Updated design tables
- Greater consideration of shrinkage
- More extensive coverage of intermediate precast shear walls
- More worked examples
- Updated slender spandrel torsion design
- New research on ledge design of L-shaped beams
- More connection information and examples, especially headed studs with fixed-fixed condition

- Post-installed anchors completely rewritten
- Stiffener design updated to new AISC methodology
- Cazaly Hanger, shallow members need hanger reinforcement
- New section on Architectural Precast
- New Handling and Erection figure related to rapid panel tripping
- New Tolerances section
- PCI Standard Design Practice not yet published

Engineering Tall Wood Buildings: The New Type IV Construction Types (Dustin Willms)

- 2021 IBC, early adoption in Washington
- Post & Beam framing and Mass Timber Panels
- Nailed timber, Glulam, CLT
- ICC Ad Hoc Committee on Tall Wood Buildings formed to create a prescriptive design for tall wood buildings
- Type IV

1. A: max 18 stories or 270 ft, fully encapsulated and sprinklered
2. B: max 12 stories or 180 ft, partially encapsulated and fully sprinklered
3. C: max 6 stories or 85 ft, fully exposed (2-hr rating), fully sprinklered
4. HT: max 6 stories or 85 ft, fully exposed (traditional type IV)

- Minimum member sizing, structural demands usually control
- Exposed wood and fire ratings based on type, CLT fire-rated adhesive
- Floor assemblies, min 1" non-combustible protection (NCP) for types A and B
- Concealed spaces, min 2" NCP for types A and B, min 1" NCP for type C
- Shaft enclosures, same as concealed spaces except no timber for type A over 12 stories or 180 ft
- No CLT shear walls yet

AISI – Cold Formed Steel Industry Updates (Jason Warren)

- AISI S100-12 NASPEC to AISI S240-15 Structural Members
- Same design equations and standards as IBC 2015
- If IBC 2021 references S100-16, use S100-16 to design members and S240-15 to design system
- Lateral design research involves successive disasters, such as an earthquake causing a fire and then an aftershock
- ASTM C754 – Specification for Installation of Steel Framing Members to Receive Gypsum Panel Products – Interior Studs, Tracks, Hat/Furring Channel, Resilient Channel, Wall Heights, etc.
- 27 mil steel sheet sheathing out of stock
- Don't stack more than 4 studs for a jamb post
- Walls with wind load should be designed as load bearing (D + L)

2019 SteelDay

By David Fennell

This year, AISC will be hosting the 2019 SteelDay event at the Microsoft Auditorium in the Seattle Library. This will take place on the morning of Friday, September 27th!
There will be networking and breakfast starting at 8 am with the presentation on the renovation work of the Space Needle at 9-11 am. There will be raffle prizes throughout the event, networking, and industry partners attending.

https://www.aisc.org/steelday/attend-an-event/

Notes on Northwest Conference, Oregon

By: Darrell Staalson

What is the Northwest Conference?
For those of you who are unaware, every year the SEAW chapters participate in the Northwest Conference. The Conference includes chapters from Washington, Oregon, Idaho, Montana, and British Columbia and is hosted by a different chapter each year. This year we were hosted by the Structural Engineers Association of Oregon and we met at the Salishan Resort in Gleneden Beach, Oregon.

The Northwest Conference consists of technical sessions to provide opportunities for professional development with presentations from local northwestern engineers and the annual meeting of the Northwest Conference Council. The SEAW delegates to the council are the current chapter presidents and the permanent delegate, Ed Huston. The Council hears the annual report from each chapter and discusses goals for the upcoming Northwest Conference.

The Northwest Conference is an opportunity to build friendships, catch up with old friends, share

technical and professional experiences with colleagues, learn from local leaders in our profession, and relax and have some fun. The effect of the conference is synergistic, and I found it to be like a mental pinball machine with everything there creating unexpected connections and new ideas.

This year I attended wearing (2) hats. At the Northwest Conference Council, I represented the SEAW State Board as the current president and the SEAW Seattle Chapter as past-president, since the current president and vice-president were not able to attend. I presented the Seattle Chapter Annual Report, which outlined our many accomplishments and our Vision for the future. I also presented the report from the Northwest Conference 2020 Committee in place of Chun Lau, Chair.

At the last technical session, I extended an invitation to all members of the Northwest Conference to join us in Seattle for the 2020 Northwest Conference from SEP 17 to 19 at the Westin Hotel. Our theme is "Innovation Powered by SEAW!" As I came into the conference hall to speak, someone asked me why I was wearing a suit and tie just to introduce the next conference. I replied, "I am representing the Seattle Chapter of the Structural Engineers Association of Washington. It's kind of important."

The Seattle Chapter Annual Report is available on our SEAW website.

As SEAW State President I also serve on the SEFW Board, ex-officio. This year at the SEFW Board Retreat in July 2019 I proposed that the Foundation fund a young member to attend the Northwest Conference under a Scholarship for Future Leaders. This has been done in the past however we have not been consistent, and I think it is time to establish this as a routine. It serves the SEAW Strategic Goal to foster young members in their professional development, which includes leadership. This year our new Equilibrium Chair, John Gunn, was given a $1,000 scholarship to attend the Northwest Conference. John's employer, Coffman Engineers, stepped up to cover John's expenses above the scholarship amount. John has shared his experiences in “My First Conference” and will making a presentation at a Seattle Chapter Dinner Meeting and possibly a YMG Meeting. The Foundation also agreed in principle to fund one young member from each SEAW chapter in the coming years.

My notes from the conference

I'm sharing my thoughts and highlights from the conference so you can use them as a starting point to begin your own technical review. It's interesting how this usually isn't a linear process since I get new ideas about various methods as I go through the task of updating my understanding of design procedures and Code requirements. My comments here reflect the fact that my primary focus is on improving my own practice. So, my comments are from that perspective.

A copy of the conference’s notes is available for SEAW members under “Resources”.

CLT

After his lecture, I was speaking to the Wood Construction presenter, Dustin Williams about CLT. I told Dustin that I wasn't convinced that CLT has the cost/benefit ratio that is touted by the marketing. For one thing, there is a lot of wood being used in the fabrication. Dustin explained that CLT is essentially used as a floor panel that is prefabricated off site. Combined with standard panel dimensions for a project and standard column connections, this allows the construction to be done very quickly. Beyond ease of installation, CLT uses "junk-wood" in the core. This helps provide a sound damping that makes for an environment that humans enjoy and greatly reduces the depth of the floor structure. This adds to the value of the space.

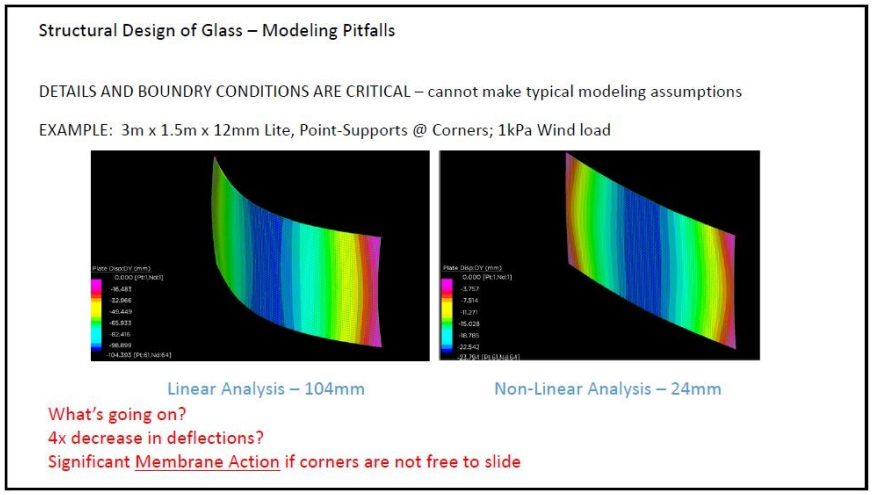
I have spent a considerable amount of time in the field resolving issues with non-conforming construction. So, I asked about how often the CLT construction process has problems. Dustin said that the real problems happen, as with other systems, when the contractor is not experienced with the CLT construction process or when the foundations are not constructed within tolerance. Otherwise, they have their standard field solutions for misalignment.

The discussion reminded me of a structural condition assessment of an apartment building I did last year. The floor assembly was a timber "double T" with glulam joists glue-nailed to 1.25" plywood sheathing, and the assembly is placed kind of like a "Berkeley Roof." I really like the idea of a floor assembly being prefabricated. So, CLT isn't the only timber system that can be prefabricated. But CLT has that same advantage. What always bothers me is the marketing hype that suggests that a system is totally new and the absolute best. Before I accept a new system, I need to dig past the marketing and get to the ugly, unvarnished facts. My seal and signature are on my designs, so I don't use systems or products that are unproven. Talking with Dustin, I think I was able to do that. I think I'll give CLT a closer look.

Glass

1. Glass has a probability of failure of 8/1000 per pane. If you want to decrease the DCR, then you add panes.
2. There are (2) methods for the design of glass.
a. Tables from the Code.

b. Analytical Procedure.
3. The Analytical Procedure is summarized as making a finite element model of the loading on the pane and overlaying a probability of crack distribution. You then add panes until your probability of failure is less than 8/1000.
4. When you have a double pane window, you have wind loads on the inner pane and outer pane. If there is an air void, the loads do not transfer across the void. If there is an adhesive, then the loads transfer partially.
5. Prof. Schultz has a procedure for creating the FEM including the density of the mesh and the modeling of the corners. You must pay close attention to the supports, or you will generate an unrealistic stress concentration. (Refer to supplemental information.)
6. I'm not up to speed on glass design and I don't think I want to add this capability to my wheelhouse. But I was interested in the issues related to creating the finite element computer model of glass and the supports, particularly Prof. Schultz's ideas on setting mesh size and modeling the boundary conditions. As with every other presentation, the ideas presented didn't always apply specifically to my practice, but they sparked ideas on related topics. For example, in this case, modeling stiffness/deflection of unblocked plywood diaphragms. It occurred to me while thinking about this lecture that I should be able to easily write a Visual Basic program to generate the finite element model of a plywood diaphragm.
7. Supplemental information sent by Prof. Schultz.
a. "Glass FEA," by Prof. Schultz.
b. "FEA Modeling of Glass," by Schultz et al.
c. "Experimental and Numerical Design Method for PSG" - JAE Schultz et al - 2012.



Excerpted from "Glass FEA," by Prof. Schultz.

Masonry

1. Mandatory Specification Checklist.
2. Compressive strength of masonry, f'm.
a. Research in 2010 was started to recalibrate the Unit Strength Method.
b. For TMS 402-16 New f'm = 2000 psi vs. f'm = 1500psi which was the historical default.
c. Results:
    i. 13% decrease in development and splice length.
    ii 15% increase in masonry shear strength.
3. Shear friction provisions added for computation of in-plane sliding at base of shear walls.
4. Anchor bolts for ASD and Strength Design:
a. Masonry crushing value has increased.
b. Interaction has changed from linear to 5/3.
5. Dispersion of load adjacent to and opening added at 3:1 down to mid-height of opening.
6. Reinforcement requirements put in one location.
7. For prescriptive design, the cavity width at veneer anchors increased to 6 5/8" under certain conditions.
8. Changes in definitions to move to using the term, "member" for the physical members and "element" for a representation of the member, such as in a finite element computer model. But with some exceptions.
9. New 72db cap on ASD lap splice lengths added to be consistent with Strength design.
10. Tables showing Verification and Inspection Requirements.

ASCE 7-16 Wind

1. Wind speeds (non-hurricane) had not been updated since 1995. More years of wind data and more stations now available. So now we have better data combined with a significant increase in knowledge of aerodynamics that gives practicing engineers more realistic wind loads to use in design which gives us the opportunity to provide a greater reliability and economy to our clients. So, this is useful and isn't

just yet another one of those perfunctory exercises in which the Code tries to write down something that good engineers have always done.

1995:	485 stations with 5+ years of data	
2016:	~1000 stations with 5+ years of data	

2. Completely new analysis of non-hurricane winds.
3. All maps have been replaced, with one for each Risk Category.
4. Net effects of map changes (non-hurricane)
a. Maps better reflect regional variation in extreme wind climate.
b. Wind speeds decrease significantly on the West Coast. For the Seattle Area:

Edition	Risk Category	MRI	Wind Speed (MPH)
10	II	700	110
16	II	700	98
10	IV	1700	115
16	IV	3000	109

5. Wind speed maps available at:
ATC - Free
ASCE 7 Hazard Tool - $45 per year and includes all hazards.
6. Low-rise C&C provisions in ASCE 7-10 are based on studies from the 1970's. Again, there has been a significant increase in knowledge of aerodynamics and from wind tunnel studies and full-scale field experiments. Found that earlier pressure coefficients were too low.
7. Equations for all GCp's are given in the commentary.
8. Low-rise flat roof pressures. Refer Figure C30-1.
a. The distribution of enveloped pressures is primarily dependent on roof height and plan dimensions only play a secondary role.
b. Roof Zone sizes and pressure coefficients have changed.
c.When W < 0.4*h the building does not correspond to a typical low-rise building shape, and there is a single roof zone, Zone 3.
9. The presentation gives an example of the difference in roof pressures between ASCE 7-10 and ASCE 7-16 for a sample flat roof in (4) areas of the country. I found it to be a useful way to wrap my brain around the changes. San Francisco shown below:

Excerpted from presentation by Don Scott at NWC 2019

10. Ke - Elevation Factor. For example, Spokane is approximately at elevation 1,900 feet, thus Ke =0.93. Refer Table C26.9-1. I have always assumed Ke=1.0, but I'll re-evaluate my method to see if it makes sense to account for the reduced density of air at elevations above, say, 3,000 feet.
11. Canopies are now explicitly addressed in Sec. 30.11.
12. Rooftop solar panels are addressed in Sec. 29.4.3.
13. There was also a good article in Structure Magazine "Wind Loads on non-Building Structures" by Emily M. Guglielmo, S.E. March 2018. And remember that if you are a member of SEAW you automatically have access to NCSEA material including Structure Magazine.

Seismic

1. For some sites you must either increase the Force by 1.5 or use a site-specific response spectrum

or meet one of the exceptions.
2. Site Amplification Factors.
a. Fa and Fv range between 80% and 120% of previous values.
b. Site Class D is no longer the default for Fa. Site Class C controls in high shaking areas since Fa > 1.2.
c. Site Class D assumed subject to Sec. 11.4.4.
3. Site-Specific Ground Motions Procedures per ASCE 7 Sec. 11.4.8 modified per paper by Kircher & Associates 2015. Forces are more accurately represented by this change.
a. use of (2) response periods (0.2S and 1.0S) gives reasonably accurate results for Site Class A, B, & C. Non-conservative for Site Class D, E, & F.
b Requirement for 1.5*Cs accounts for this.
c.Future is a (27) point Response Spectrum.
4. Exceptions to requiring Site-Specific Spectra
a. Site Class D & E Sites with S1 > 0.2, provided Cs is
    i. Determined by Eq. 12.8-2 for T < 1.5Ts, and
    ii. Taken as 1.5 times value computed by Eq. 12.8-3 for TL > 1.5Ts or Eq. 12.8-4 for T > TL.
b. Site Class E with Ss > 1.0 provided Fa taken from Site Class C.
c. Site Class E with S1 > 0.2, provided T < Ts, and ELF is used for the analysis.
5. All load combinations are now in Chapter 2.
6. 30% reduction in design forces for short regular structures per ASCE 7 Sec. 12.8.1.3.
7. Accidental torsion shall be applied for determination of horizontal irregularities. Accidental torsion need not be included when determining seismic force E except:
a. Seismic Design Category B with Type 1b horizontal structural irregularity.
b. Seismic Design Category C, D, E, and F with Type 1a or Type 1b horizontal structural irregularity.
8. Transfer Diaphragms required to use Ω_0. Ed Huston remarked that many of us have been using this interpretation for several years.
9. Shallow foundations per ASCE 7 Sec. 12.13.9.2
10.15% scaling reduction relative to ELF results is eliminated. Must scale forces to 100% of ELF results per ASCE 7 Sec. 12.9.1.4.1.
11. Reminded that results from Linear Response History Analysis keeps the signs while Modal Analysis does not.
12. New requirements for egress stairs and ramps per ASCE 7 Sec. 13.5.10. Experience from Christchurch EQ found many people trapped in damaged buildings because the egress stairs collapsed. Extensive rescue efforts were required which took resources away from critical areas and should not have been necessary.
13. Accidental torsion need not be accounted for in non-building structures if certain criteria are met. Often the behavior is already captured in the CML.
14. Chapter 16 rewritten by Ron Hamburger.

Cold-Formed Steel
1. Talking with Jason Warren about strengthening existing floor joists. Jason said that SCAFCO can make any shape I need, and have it delivered to the site within (14) days.

Darrell Staaleson is Principal Engineer at Staaleson Engineering, P.C.
SEAW State President
SEAW Seattle Chapter Past-President (2018-2019)

Seminar: Updates to the Provisions of ASCE 7-16 & ASCE 41-17

Saturday, September 28, 2019
8:30 AM 4:30 PM

Are you ready for the 2018 IBC and its newly updated standards?
The SEAW Education Committee is hosting an all-day seminar regarding the changes to ASCE 7-16 and ASCE 41-17 on Saturday September 28, 2019.
These two standards will be referenced in the 2018 IBC which is scheduled for adoption by the State of

Washington on July 1st of 2020. The SEAW Education Committee is also planning a seminar on the changes in the 2018 IBC for the Spring of 2020 as a continuation to this seminar (date to be announced later).
The September seminar will cover:

ASCE 7-16 changes to:
- Chapter 2 (Combinations of Loads)
- Chapter 3 & 4 (Dead & Live Loads)
- NEW Chapter 6 (Tsunami Loads)
- Chapter 7 (Snow Loads)
- Chapter 11 (Seismic Design Criteria)
- Chapter 12 (Seismic Design Requirements for Building Structures)
- Chapter 13 (Seismic Design Requirements for Non-Structural Components)
- Chapter 15 (Seismic Design Requirement for Non-Building Structures)
- Chapter 16 (Non-Linear Response History Analysis)
- Chapter 21 (Site-Specific Ground Motion Procedures for Seismic Design)
- Chapters 26 to 31 (Wind Loads)

ASCE 41-17 changes to:
- Chapter 2 (Performance Objectives and Seismic Hazards)
- Chapter 3 (Evaluation and Retrofit Requirements)
- Chapter 4 (Tier 1 screening)
- Chapter 5 (Tier 2 Evaluation and Retrofit)
- Chapter 7 (Analysis Procedures)
- Chapter 9 to 12 (Materials chapters)
- Chapter 13 (Non-Structural Components).

Presenters:
Ed Huston, PE, SE, Smith & Huston Inc.
Cale Ash, PE, SE, Degenkolb Engineers
Michael Chamberlain, EIT, Hart Crowser
Laura Rendos, EIT, Magnusson Klemencic Associates
Marcus Freeman, PE, Magnusson Klemencic Associates
Donald Scott, PE, SE, F.SEI, F.ASCE, PCS Structural Solutions
Rebecca Hix Collins, PE, SE, LEED AP, Coughlin Porter Lundeen
Bryan Zagers, PE, SE, Coughlin Porter Lundeen
Zach Whitman, PE, Coughlin Porter Lundeen

Schedule:
Registration 8:00 am
Seminar 8:30 am - 4:30 pm

Location:
Seattle City Hall, Bertha Knight Landes room (5th Ave entrance)

Cost per person (seminar or webinar):
Members $240
Non-Members $340
Students $50
Notes only $100
***Webinar attendees - No lunch and No printed notes offered.*

Sponsor options:
Sponsor Table (includes 2 entries) $500;
Sponsor Name in notes $150.
This seminar will quality for 7 PDH's. Lunch and coffee will be provided. Printed notes provided. PDF of the notes emailed.
Webinar format available on the same day. Please specify when registering. No lunch and no printed notes for this option.
Click here to Register! Please register early! Registrations less than two weeks prior to the seminar will incur a $25.00 late fee. Cancellation of registration will be subject to a $25.00 administrative fee.

YMG Corner

By Linda Ji

The SEAW YMG is glad to announce that we have been short-listed again as a finalist for YMG of the year, to be announced at this year's NCSEA Summit. Read about all the finalists here.

We finished off the 2018/2019 season with our annual Sika Facility and Vancouver Timber Buildings tour. This included a tour of the Sika manufacturing facility up in Surrey, BC along with two learning sessions about concrete repair materials and FRP strengthening for concrete. This was followed the

next day by a tour of notable glulam and timber projects in Vancouver, sponsored by Fast+Epp.

We look forward to kicking off the 2019/2020 season with our End of Summer Boat Party hosted again by Hilti on August 23rd. Please contact Juzer Millwala (juzer.millwala@kpff.com) for more information.

We are always looking for companies to sponsor social events or technical presentations. Please reach out to seawymg@gmail.com if you are interested in sponsoring an event. You can join the YMG mailing list here to be kept up to date on our upcoming events.

2019 Engineers of the Year: Paul Brallier & Joyce Lem

By Ed Huston

Paul Brallier and Joyce Lem holding their plaques on either side of Ed Huston

For the first time, the Seattle Chapter has given the award to two members!
So, why did we break with tradition, you might ask. Quite simply, because they have both done amazing things with the SEAW Disaster Preparedness and Response Committee, and the Engineer of The Year Committee could not imagine only giving the award to one of them. We considered giving it to them in consecutive years, but could not decide who should get it first. So, does giving it to two recipients in a year diminish the award you ask? No. We believe that it enhances it. This may be the only time in the history of the award where it was given twice in one year!

As for the four reasons for the award, both Paul and Joyce are nurturing and have mentored countless young engineers. Both are very technically accomplished. But, this year, these awards are for Service to SEAW and the profession, and for very favorable Visibility for SEAW.
Paul is a long-term member of the DPRC, chairing that committee from 2007 to 2012. Joyce took over for Paul and is the current chair. This committee has grown from a semi-active SEAW committee to a joint committee with AIA and many local Emergency Managers. Through their tireless effort and working with both other committee members and other organizations, we now have the WAsafe Structural Assessment Program. The Washington Emergency Management Division now has a Design Professional program for registering volunteers, which is similar to the Cal OES Structural Assessment Program. Signatories to the WAsafe Memo of Understanding include SEAW, AIA, ASCE, and WABO. While several people and organizations worked to make this happen, Paul and Joyce led the charge. Joyce and Paul are both SEAW coordinators in the WAsafe Structural Assessment Program. Paul is also a Cal OES coordinator. All this work is both a service to SEAW and brings incredible visibility to SEAW.

Joyce organizes ATC-20/ATC-45/Cal OES SAP/WAsafe trainings, and Paul is one of our principle trainers, having taught these classes since 1991.

A few years ago, a Washington State Attorney General ruled that Washington's Good Samaritan Act protected volunteers, but not Professional Organizations like SEAW, ASCE, and AIA. Joyce and Paul spearheaded the effort to go before the Washington Legislature and change that! The Governor signed that revised legislation into law on April 17, 2017. Again, both service and incredible visibility!

Joyce served on the Seattle Chapter Board and helped organize the Nepal seminar.

Paul helped grade the Washington State Specific Structural III exam and served on the Washington Task Force 1 Urban Search and Rescue Team.
Both retired this last year, so this was the year to honor them.
Joyce and Paul, thank you for all your efforts on behalf of the Seattle Chapter of the Structural Engineers Association of Washington.

SEAW Wind Engineering Committee (WEC)

By Scott Douglas

The Wind Engineering Committee has not been meeting for most of this year due to membership time limitations and priorities. Regular meetings are scheduled to resume in October.

Our priority for the next several months will be searching for funding for a study of the Special Wind Regions (SWR's) in Washington. These SWR's are identified in Section 26.5.2 of ASCE 7.

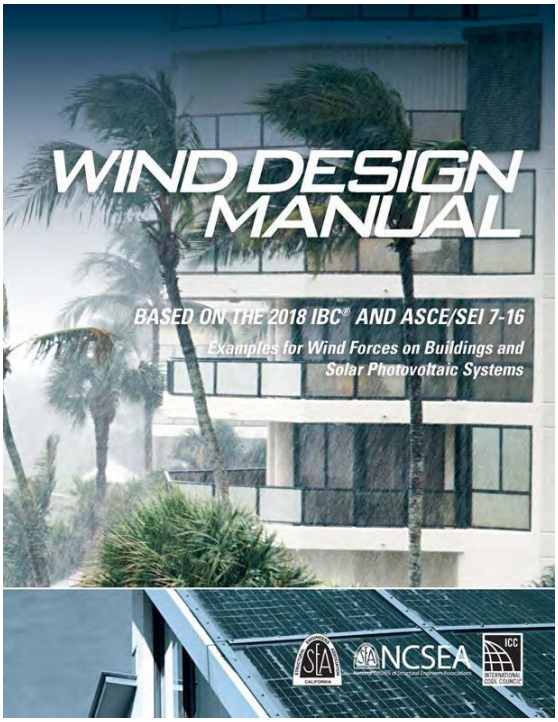
Since one of the major SWR's is along the Columbia River Gorge on a shared boundary with the State of Oregon, SEAW has partnered with the Structural Engineers Association of Oregon (SEAO) to identify the specific magnitudes and boundaries of the special wind regions in our respective states. Both SEAW and SEAO have applied for grants from NCSEA to help fund this study. Additional grants are being pursued, and pledges are being solicited from private consulting firms, industry members, and governmental entities. A directed fund and contribution box for the SWR study has been set up by SEFW at https://sefw.org/donate.html for those wishing to make a donation to this effort.

A second volume of the SEAOC Wind Design Manual is planned. Volume 2 will focus on ASCE 7 Chapters 29 and 30, non-building structures and components and cladding. A list of example problems is being developed. The SEAW WEC would appreciate receiving problems to include in Volume 2 from the general membership. Please forward these to sdouglasscott@gmail.com.

Volume 1 of the Wind Design Manual is available for purchase. Volume 1 is similar in format to the five-volume SEAOC Seismic Design Manual with nineteen example problems. Seven of the problems involve Roof Solar Panels and five of the remaining twelve problems were authored by SEAW WEC members. The publication is available on the ICC Website at: https://shop.iccsafe.org/wind-design-manual-based-on-the-2018-ibc-and-asce-sei-7-16-examples-for-wind-forces-on-buildings-and-solar-photovoltaic-systems-1.html. A discounted price is available for ICC members or NCSEA members (all SEAW members are NCSEA members) at http://www.ncsea.com/.

Next Meeting: Thursday, October TBD from 12:00 noon to 1:00 pm at MKA, 1301 5th Avenue #3200, downtown Seattle.

Go to meeting log-in information:
https://global.gotomeeting.com/join/974079181
or phone dial-in: TBD
Access Code: TBD



Please contact the WEC chair, Scott Douglas sdouglasscott@gmail.com, to join the SEAW WEC and to receive information and announcements on Committee activities and actions.

Thornton Tomasetti Announces Management Evolution Fueling Firm's Plan to Be Global Leader of Change and Innovation in AEC Industry

Enduring Organization Maps the Future on 70th Anniversary, Taps Wayne Stocks in D.C. as Firm's

President

(New York – September 10, 2019) – In pursuit of its goal to become the global driver of change and innovation in the industries it serves, Thornton Tomasetti's board of directors announces the latest evolution in its leadership as the firm marks its 70th anniversary. The more than 1,500 engineers, scientists, architects and other professionals collaborating from over 50 offices internationally on the design and performance of structures, materials and systems are led by an executive team with more than 150 years combined dedication to the firm.

Continued Here

2019 Structural Engineering Summit

By Leo Baran

The NCSEA Structural Engineering Summit is the only annual event designed *by* structural engineers *for* practicing structural engineers. It draws the best of the profession together for the best practical education with expert speakers, a leading trade show and compelling peer-to-peer networking, at an event designed to advance the industry. Take this chance to be a part of this growing and dynamic event!

New for 2019

- Beginning on Tuesday and ending Friday afternoon, the program offers more education and less overlap.
- Five Keynote Presentations!
- The SE3 National Symposium, the first Structural Engineering Engagement and Equity (SE3) symposium to be held in conjunction with a national engineering conference
- A Welcome Event sponsored by the Structural Engineers Association of California (SEAOC)

Visit http://www.ncsea.com/events/annualconference/ to learn more.

Registration rates are the same as last year.

Use this link and register today: http://www.ncsea.com/events/annualconference/registration2/

2019 SEAW Scholarship Recipients

By Angela Gottula Twining

Madison Broers, EIT, received a $5,000 SEAW Scholarship. She earned a Bachelor of Science in Civil Engineering from Washington State University and is beginning a master's program at WSU in the fall. At WSU, she served as captain of the Steel Bridge Team as well as president of the ASCE student chapter, where she founded a peer-to-peer mentoring program for younger students to learn from ASCE officers. She is also an honors student, member of the Society of Women Engineers, and ATC-20 certified. Madison has had internships at DCI Engineers in Spokane, Lund Opsahl in Seattle, and Pacific Engineering & Design in East Wenatchee. At WSU and in her free time, Madison enjoys sports such as dodgeball, softball, flag football, volleyball, and golf. Madison graduated from Eastmont High School in East Wenatchee.

Carolyn McCann, EIT, received a $5,000 SEAW Scholarship. She earned a Bachelor of Applied Science in Civil Engineering from the University of Michigan and is headed to Stanford University to earn a master's degree in structural engineering. She has had internships at KPFF Consulting Engineers in Seattle and the Tetra Tech offices in Ann Arbor and Brighton, Michigan. Carolyn was on the University of Michigan swimming and diving team for four years, serving as senior team captain and twice participating in the Olympic

trials. At UM, she volunteered with the Be The Match bone marrow donation organization and at the local children's hospital. Carolyn graduated from Gig Harbor High School.

Lindsey Peterson, EIT, received a $3,000 SEAW Scholarship. She earned her Bachelor of Science in Civil Engineering from Gonzaga University and is currently working full time at Dibble Engineers in Seattle. At Gonzaga, she participated in the ASCE student chapter, SEAW Younger Members Forum, and Society for Women in Engineering. She was an honors student who participated in campus research projects, wrote her thesis on cross-laminated timber, and interned at the Whiting-Turner Contracting Company in Dalles, Oregon. At Gonzaga, she played intramural volleyball and softball and volunteered for organizations like Habitat for Humanity and the Boys & Girls Club. Lindsey graduated from Mt. Spokane High School in Spokane.

Jenna Louie, EIT, received a $3,000 SEAW Scholarship. She earned a Bachelor of Science in Civil Engineering from the University of Washington and in the fall, she is headed to University of California, Berkeley to earn a master's degree in science, mechanics, and materials. At UW, she participated in the SEAW Student Chapter (serving as treasurer), the ASCE student chapter (serving as president and secretary), and the Concrete Canoe Team (serving as lead and finance lead). She was also awarded the Society of Women Engineers' Outstanding Female Award for the UW Civil and Environmental Engineering Department. Jenna has had internships at WSDOT, Boeing, and currently Coughlin Porter Lundeen, and in her free time, she enjoys spending time outdoors and staying active. Jenna graduated from Lindbergh High School in Renton.

New Heavy Timber Recreation Facility Starts Construction in Northern Idaho

By: Colby Litzenberger, PE, SE – DCI Engineers

Construction has begun on a new heavy timber project in Worley, Idaho. The Marimn Health Recreation Center is a $16 million, 33,000 SF facility that will host a gymnasium, a natatorium - including a water slide that extends out of the building envelope and then back in again, a weight room, a multi-purpose room and a teen center. NAC Architecture (Spokane, WA) is the architect of record and DCI Engineers (Spokane, WA) is the structural engineer of record.
Construction consists of a combination of heavy timber framing with SIPS roof panels, conventional wood framing, and concrete masonry units.

Continued Here

State and Chapter Committee Reports

Contact the committee chair if you are interested in learning more or getting involved:

- NCSEA Delegate – Chun Lau
- Earthquake Engineering Committee – Kai Ki Mow
- One of the current main focus and an important topic that the committee hopes to address in the upcoming year is the Increased Seismic Load in the newly published ASCE 7-16.
- Members interested in EEC can find additional information regarding the meeting on the SEAW website calendar or can contact the committee chair.
- Outreach Committee - OPEN
- To sign up to volunteer or to mentor, visit the SEFW page.
- Sustainability Committee – Rachel Martin
- Refresher Committee – Mark Whiteley
- Public Information Committee – Darrell Staaleson
- Disaster Preparation/Response Committee – Joyce Lem
- WABO Liaison Committee – Matt Snook
- The SEAW/WABO Liaison committee is now available for questions from SEAW or WABO members. These questions can be about subjects addressed in the white papers already issued or general questions in the realm of structural engineering practice as it relates to interaction with the various building departments. Comments or questions can be emailed to charlie@ctengineering.com.
- Technology Taskforce – Morgan Wiese
- Membership Task Group – Jill Shuttleworth
- Continuing Education Committee – Nathalie Boeholt
- Scholarship Committee – Kevin Solberg

Employment Opportunities

Are you currently seeking employment as a structural engineer, senior manager, or a senior engineer technician? Check out our job board for current employment opportunities. Learn More

Project or Senior Structural Engineer

OLMM Consulting Engineers is a well-established, reputable, and award-winning structural engineering firm with offices in San Francisco and Oakland. The success of our strategic plan and the diversity of our projects have contributed to our continued strong business. Our projects include major public buildings, airports, multi-family housing, healthcare facilities, educational facilities and transportation structures. OLMM is an equal employment opportunity employer.

We believe our people are our main asset and the success of our people is the key to the success of our company. At OLMM, we strive to create a collaborative and nurturing corporate culture that fosters teamwork and close relationships. We have monthly company parties, a company picnic, a “day out to the baseball game”, and holiday celebrations.

We have an immediate opening for a Project or Senior Level Structural Engineer. This is an exciting opportunity for the right individual interested in taking a leadership role and contributing to the future growth and success of the company.

We offer the following:

- Diverse and challenging projects
- Excellent opportunities for professional growth and advancement
- Collaborative working environment
- Excellent compensation commensurate with qualifications and experience
- 401(k) plan with company matching
- Profit sharing plan
- Incentive compensation
- Major medical, dental, vision, and long-term disability insurance.

Minimum Requirements for the Position:

- Degree in structural engineering from an accredited university
- PE license. SE license is a plus
- Minimum 6 years of increasingly responsible experience in analysis and design of major building structures in areas of high seismicity using California Building Code, and

demonstrated experience in preparation of well-coordinated structural drawings and specifications
- Excellent written and oral communication skills
- Ability to work well in a collaborative environment.

Please send resume with cover letter to:

Sunil Gupta, PhD, SE
Principal
sunil@olmm.com

Come join us in sunny Northern California and see the difference!

Executive Director

Northwest masonry industry association is seeking an Executive Director. Responsibilities include association management; building code development; creation of educational programs and delivering technical presentations; technical support for design professionals; and coordination of industry research projects.

Northwest location permitting residence in Washington or Oregon. To express interest, submit a cover letter and resume to admin07@nwcma.org.

Position Requirements:
- Bachelor's degree in civil/structural engineering.
- Minimum 3-5 years' experience in commercial building design. A professional license is preferred.
- Excellent oral and written communication skills.
- Ability to work independently.
- Outgoing personality with the ability to provide design guidance and engage design professionals in discussions regarding building material selection. Existing contacts within the regional A/E/C community preferred.
- Some travel away from home with overnight stays.
-

For additional information please visit www.nwcma.org/careers.

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. Read More

New Members:

- Nick Pellerin
- Shivang Gupta
- Gino Mazzotti
- Cal Bearman
- Trent Tinney
- Gregg Andrus
- Christopher Shaw
- Edward Benson
- Vidya Sagar Ronanki
- TJ Bolser
- Vincent Valenti
- Chad Schluter
- Abdul Chahim
- Anthony Macklin
- Andy Ewing
- Brian Moll
- Eric Norton
- Harika Kudumula
- Muruganandam Mohanamurthy
- Chris Hayes
- Kevin Vaughn

Upcoming Events

August 15-17: 2019 NW Conference
September 17: SEAW / AIA DPRC Meeting
September 24: Seattle Chapter Board and Dinner Meeting
September 28: Seminar: Updates to the Provisions of ASCE 7-16 & ASCE 41-17
October 22: Seattle Chapter Board and Dinner Meeting
November 6: SEAW Forum
November 19: SEAW / AIA DPRC Meeting
November 26: Seattle Chapter Board and Dinner Meeting
December 12: Seattle Chapter Informal Holiday Gathering
December 17: SEAW / AIA DPRC Meeting

For more details and registration on events visit website.

From the Editor

SEP 2019

Equilibrium publication Team:
John Gunn, Editor
Darrell Staaleson, Past Editor
Zohrah Ali
Allison Tran
Blaine Sanchez
Lisette Terry
Shivang Gupta

Equilibrium is back! I hope everyone had a great summer. Please read about my experience at the 2019 NW Conference in “My First Conference”.

ACTION ITEMS:
1. All members are welcome to submit articles to Equilibrium. To help you with your writer's block, here are a few topics: Write “Engineer's Notes from Afield,” summarize an interesting technical design you worked on, write about how you have been successful and increased productivity with an accounting procedure or marketing technique, write about your experiences doing community service, or share some construction site photos and talk about lessons learned.

2. “A Picture and a Paragraph.” Please use the article submittal form provided and the picture needs a caption along with the names of the people in the photo.

3. Please submit your articles in Word format using the Article Template. [Article Template]

4. Please send your articles to jmg485@cornell.edu.

CORRECTIONS:
None

September Puzzle:
What did the candy bar “Twix” used to be called in Europe?
Bonus: What does “Twix” stand for?
Bonus Clue: It’s a portmanteau.

Look on the SEAW Facebook Page for a picture clue!

The first SEAW member to respond on our SEAW Facebook Page or at the next dinner meeting – ***with a correct and full answer*** - will get a cash prize.

June Puzzle:
What is the name and value of the unit of currency smaller than a penny that is still used in accounting in the US?
Bonus: What year was the unit first used?
Clue: The unit is used to express gasoline prices.
Answer:

The currency is called a mill and is worth a tenth of a penny. It is also called a basis point in finance. It was first used in 1786 by the Continental Congress.

https://en.wikipedia.org/wiki/Mill_(currency)