



Newsletter of the  
Structural Engineers  
Association of Oregon

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SEAO has a LinkedIn account  
and can be followed at [SEAO  
LinkedIn Page](#).

# CONNECTIONS

April 2023 Volume 22 Issue 7

## Upcoming SEAO Meetings and Events:

### Tuesday, April 11, 2023: SEOSF Trade Show & Trivia Night

Trade Show Time: 5 pm to 6:30 pm

Dinner & Trivia: 6:30 pm to 8 pm

Pre-Trade Show Mini-Seminars Topic & Times: To Be Determined

Location: Monarch Hotel & Conference Center, 12566 SE 93r Avenue, Clackamas, OR

Cost: Free to SEAO Attendees

See Pages 3, 5, and 10 for more information.

### Tuesday, April 25, 2023: SEAO Spring Seminar

Topic: An Overview of ACI 318-19 for the 2021 IBC

Speakers: S.K. Ghosh, Ph.D., President, S.K. Ghosh Associates and Kirsten Zeydel, S.E., Director of Design, Nevell Group, Inc.

Time: 8:00 am to 4:00 pm

Location: Sheraton Portland Airport, 8235 NE Airport Way, Portland, OR

PDH: 6 Hours.

Cost: \$200 Member; \$250 Non-Member; \$65 Student/YMF

See Page 6 for information and visit: <https://www.seao.org/events/apr2023/overview-aci-318019-2021-ibc> to register.

### Tuesday, May 9, 2023: SEAO Lunch Chapter Meeting

Topic: Taylor Devices Update and an additional special guest, the City of Portland, to outline the City's new EQUIP (Emergency Quick Inspection Program)

Time: 11:30 am to 1:00 pm

Location: Portland City Grill, US Bancorp Tower, 111 SW 5th Ave, 30th floor, Portland, OR

PDH: 1 Hour.

Cost: \$35 Member; \$45 Non-Member; \$20 Student

Visit: <https://www.seao.org/events/may2023/taylor-devices-update> for more information and to register. See Page 14 for more information on EQUIP program.

### Wednesday, July 19, 2023: SEAO/OACI Golf Tournament

Location: Pumpkin Ridge Golf Club, 12930 NW Old Pumpkin Ridge Road, North Plains, OR

Shotgun Start: 1:00 pm; Social Hour 6:00 pm; Dinner & Awards 6:30-7:30 pm

Register Early—Event Will Sellout

For registration form, visit: <https://www.seao.org/events/jul2023/seaooaci-golf-tournament>  
See Pages 12 and 13 for Additional Information and PDFs of Registration and Sponsorship Forms.

### Thursday, July 20, 2023: SE3/YMF Speed Mentoring Event

Time: 5:30 pm to 8:00 pm

Location: Rogue Eastside Brewery, 928 SE 9th Avenue, Portland, OR

See Pages 4 and 11 for Additional Information and

### September 14— September 15, 2023: SEA NW Conference (SAVE THE DATE)

Location: Hilton Bellevue, 300 112th Avenue SE, Bellevue, WA

See Page 4 for more information.

### February 13, 2024: SEAO Structural Engineering Awards Banquet (SAVE THE DATE)

See page 4 for more information.

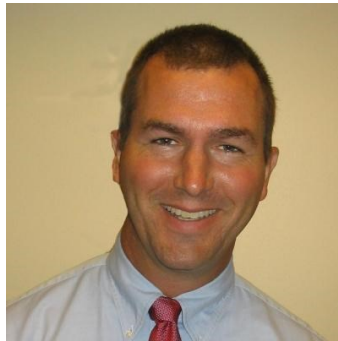
**CONNECTIONS** is a monthly publication of the Structural Engineers Association of Oregon, published to disseminate current news to our membership and others involved in the profession of structural engineering. The opinions expressed reflect those of the author and, except where noted, do not represent a position of SEAO.

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## PRESIDENT'S MESSAGE

BY: PEDER GOLBERG

SEAO Members,



Spring in the NW. This means it is time for our Tradeshow which will be back live, in person at the Monarch Hotel on April 11<sup>th</sup>. It is free to SEAO members so come out early to get some PDH credits, meet and greet (and support by showing up) our vendors, and come support the scholarship fund. Get your trivia teams ready for some grueling competition that will occur after the first half of the vendor tradeshow.

March's lunchtime chapter meeting on the Tacoma Narrows Bridge was very informative, and I was able to learn much more about the behind the scenes work that occurred during design and the week leading up to the failure. Able to comprehend so much more than I did 30+ years ago when I first had a presentation on that failure while still an undergrad in school. The board is always looking for topics for future meetings so please, if you have some topic you want to share or want to know more about, please let any of the board members know. We want to start next year's board off with a year full of interesting topics.

The committee that I want to highlight this month is the Young Member Forum that facilitates the formation, growth, and success of our organization through collaboration, support, and outreach in an effort to transition students and young engineers into successful, professional engineers and future leaders of the Structural Engineering profession. They meet often to foster an exchange of experience and knowledge amongst the younger members in a social environment. I encourage all younger engineers to get involved with this group and our profession.

Last item for this month's message is to again remind everyone that it is time to start thinking about elections to the SEAO Board for 2024. Please see page 3 for information on open positions.

Peder

### BOARD OF DIRECTORS

**President**  
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## SEAO COMMITTEES

### CODE ADVISORY COMMITTEE

Seismic

*NEW CHAIR STARTING SOON*

Wind

*OPEN CHAIR*

Snow Load

*Andy Stember*

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### STRUCTURAL ENGINEERS

#### EMERGENCY RESPONSE (SEER)

*David Tarries*

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### PROGRAM COMMITTEE

Awards

*Brynn Adkins*

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Golf Tournament

*OPEN CHAIR*

Conferences

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### ADVOCACY COMMITTEE

Website

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Engineers Week

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*Eric Esqueda & Emma Olds*

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SE3

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### CONTINUING EDUCATION

#### COMMITTEE

Seminars

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### MEMBERSHIP COMMITTEE

Newsletter

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Roster

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### DELEGATES

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*Seth Thomas (Alternate)*

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## 2023 SEAOSF TRADE SHOW, TRIVIA & MINI-SEMINARS

APRIL 11, 2023

12:15 PM TO 8:30 PM

The 2023 SEAOSF (Scholarship Foundation) trade show will be held on April 11, 2023 at the Monarch Hotel at 12566 SE 93rd Avenue in Clackamas, Oregon. There will be pre-show mini-seminars and vendor booths in the exhibitor hall during the trade show.

Schedule of Events:

- Pre-Show Mini-Seminars in the Columbia Room: 12:15 pm to 5:00 pm
- Trade Show in the Main Exhibitor Hall: 5 pm to 6:30 pm
- Dinner & Trivia in the Main Exhibitor Hall: 6:30 pm to 8:00 pm

SEAOSF will also be holding a raffle during the trade show to raise money for the SEAOSF scholarships. Donations to the raffle are greatly appreciated. Donations will be announced at the raffle and in the newsletter for additional name exposure.

See page 5 for mini-seminar schedule.

Please register by April 9th for both the trade show and the trivia event so that we can get an accurate count for the dinner and trivia event.

To register for the trade show, please visit: [https://www.seao.org/events/apr2023/seaosf-tradeshow-trivia-night?check\\_logged\\_in=1](https://www.seao.org/events/apr2023/seaosf-tradeshow-trivia-night?check_logged_in=1).

To register your team for the trivia event, please visit: [https://docs.google.com/forms/d/1tUeO6TD45AdCsvKob04OmcpZWeNRPHPWANx8doEvNLA/viewform?edit\\_requested=true](https://docs.google.com/forms/d/1tUeO6TD45AdCsvKob04OmcpZWeNRPHPWANx8doEvNLA/viewform?edit_requested=true) or see page 10.

## SEAO BOARD OF DIRECTORS UPCOMING ELECTION 2023-2024

It is that time of year that SEAO looks to establish a new Board that will serve during the 2023-2024 year.

SEAO is largely fueled by the volunteer efforts of our members on committees and the leadership board. If you have interest in serving your structural engineering community and helping to provide information that assists in educational and networking opportunities that SEAO provides, please contact David Linton at [dlinton@mcknze.com](mailto:dlinton@mcknze.com).

This year's election is looking to fill the following positions:

- Vice President
- Secretary
- Director (Non-P.E.) (2-year service)

**SE3 & YMF PRESENT:  
SPEED MENTORING  
THURSDAY, JULY 20, 2023**

Please join us on **Thursday July 20** from **5:30 to 8:00 PM** at the **Rogue Eastside Brewery**, 928 SE 9th Avenue, Portland, Oregon, for refreshments, fun, and mentoring! The SE3 Mentorship Team aims to offer younger engineers opportunities to meet with more experienced professionals. This speed mentoring event is a one-time, two-hour session and focuses on time-efficient conversations, quick advice, immediate mentorship guidance, and professional networking. Food and beverages are provided, engineers of all levels are welcome to attend, and the event is **free!**

Please fill out the form linked here if you are interested in attending and would like more information: <https://app.smartsheet.com/b/form/da95b9e9347c4e6d854b4baace13271d>

See flyer on page 11 for information.

**2023 SEAO EXCELLENCE IN  
STRUCTURAL ENGINEERING  
AWARDS  
FEBRUARY 13, 2024  
SAVE THE DATE**

The SEAO Awards Committee is planning for the 2023 SEAO Awards.

Categories may be modified and website will be updated with new entry requirements and open for entry submissions in June, 2023. SEAO will notify all members when the website is officially be open to receiving entries.

We anticipate a deadline for submissions in late October, 2023.

We want to see what you have been working on! Start thinking about a project or projects you want to enter.

**SEA NORTHWEST CONFERENCE  
SEPTEMBER 14-15, 2023  
SAVE THE DATE**

After a three-year hiatus, the annual 2023 SEA Northwest Conference (NWC) will be held September 14 and 15, 2023, at the Bellevue Hilton Hotel, 15 minutes east of downtown Seattle.

The Seattle Chapter of SEAW will be hosting the conference and is excited about the re-start of the SEA Northwest Conference and hopes to see SEAO members at the conference in September.

This year's theme is "Innovation in Structural Engineering". The conference will feature technical sessions designed to educate engineers about innovations utilized in structures that have come to symbolize the unprecedented growth of the Pacific Northwest region. There will be technical sessions that will include the innovative design of projects in the Pacific Northwest as well as technical sessions on codes and standards, and non-technical sessions that are of interest to young and seasoned practicing structural engineers. Attendees can earn up to 13.0 PDH Development hours over the course of the 2-day conference. The conference will also feature networking events and a trade show with up to 30 exhibitors.

**Presentations include:**

- Engineering for Elephants: A Structural Safari by Ed Quesenberry.
- Using Applied Research for Update of Seismic Evaluation and Retrofit Methods by Terry Lundeen.
- The Lateral System Design of the Artise: Bellevue's First Building with Fluid Viscous Dampers by Scott Erickson.

The Conference preliminary schedule, presentation descriptions and speaker bios, attendee registration, hotel accommodation, sponsor and vendor registration, and 2023 event sponsors can all be viewed at: <https://www.seaw.org/2023seanwconference>

## TRADE SHOW MINI-SEMINAR SCHEDULE

**12:15 – 1:15 PM**

**DeWalt**

### **Designing with Undercut Mechanical Anchors**

Speaker: Lars Anderson, Field Engineer for DEWALT ANCHORS & FASTENERS

This presentation will provide an overview of how to properly design undercut anchors in concrete. After this presentation, attendees will have an understanding of undercut anchor anatomy, proper installation procedures, design, and compliance considerations. Real-world case studies will also be discussed. This presentation is accredited through NCSEA Diamond Review for 1.0 hour of continuing education credit (PDH).

**1:30 - 2:30 PM**

**Woodworks**

### **Differential Material Movement in Tall Mass Timber Structures**

As the height of mass timber buildings continues to grow, so too does the level of design and detailing knowledge required to achieve optimal building construction and performance. One necessary consideration for tall mass timber buildings is vertical movement—including column shrinkage, joint settlement, and creep. The main concerns are potential impacts on vertical mechanical systems, exterior enclosures, and interior partitions, as well as differential vertical movement of the timber framing systems relative to building elements such as concrete core walls and exterior fa-

ades. This presentation will analyze reasons for vertical movement (short and long term), provide methods of calculating anticipated movement, highlight detailing options to minimize and accommodate movement, and discuss strategies implemented on tall mass timber projects completed in North America.

**2:45 – 3:45 PM**

**Weyerhaeuser**

### **TJI® joist and other ELP in Multi-Family projects**

Speaker: Renee Strand PE, Sr. Engineering Manager and Mike Bair – Territory Manager

This presentation will inform and review the specification of the Trus Joist™ brand Engineered Lumber Products for use in multi-family construction projects. Items to be discussed will include: products and services available, design considerations, associated fire assemblies, most encountered “Gotchas”, Building Code requirements and recent changes, and a time to ask questions and provide answers.

**4:00 – 5:00 PM**

**Ram Jack**

### **Design & Theory of Helical Piles & Micropiles**

Seminar will first go over the design and theory of helical piles and micro piles, then explore their various applications on different job sites. Finally, Ram Jack will discuss how they can use both helical piles and micro piles for seismic upgrades when retrofitting existing buildings.

## ASK A QUESTION, GET AN ANSWER

Do you have a code question you would like to ask the Wind Committee or Snow Committee?

SEAO is pleased to provide a simple way for Q&A's with technical committees. Email questions to [jane@seao.org](mailto:jane@seao.org), and SEAO will direct your question to the appropriate committee chair for a response.

Questions and their answers will be made anonymous and available to the membership on the website [www.seao.org](http://www.seao.org). Committees include: Seismic, Wind, Snow, Code, Vintage Building, and Special Inspections.

# SEAO SPRING SEMINAR AN OVERVIEW OF ACI 318-19 FOR 2021 IBC AT SHERATON PORTLAND AIRPORT MARCH 27-29, 2023

## Seminar Summary:

The 2021 IBC has been available since October 2020. It was adopted by the state of California on January 1, 2023. Oregon also adopted the same code in the 2022 OSSC, effective April 1, 2023. The 2021 IBC Chapter 19, Concrete, adopted ACI 318-19, whereas ACI 318-14 was the previously referenced standard in the 2018 IBC (2019 OSSC). There is a large number of technical changes from ACI 318-14 to ACI 318-19, many of which are quite substantive and some of which are of far-reaching consequences. An overview of the extensive changes will be provided at this day-long seminar. Some of the bigger ACI 318-19 changes include:

- Introduction of high-strength reinforcement (80- and 100-ksi yield strength)
- Introduction of reinforcement grade factor in equation for straight bar development length
- New equation for hooked bar development length
- New and simpler one-way shear equations for nonprestressed members
- Updated two-way shear provisions for two-way slabs
- Newly added provisions for screw anchors and shear lugs
- Introduction of shotcrete provisions
- Deep foundation design provisions of IBC/ACE 7 imported into ACI 318
- Extensive and important revisions to Chapter 18, Earthquake-resistant structures, including very substantive changes to the special shear wall design provisions.

## Speakers:

**S. K. Ghosh, Ph.D., President, S. K. Ghosh Associates Inc. & Kirsten Zeydel, SE, Structural Consultant, S. K. Ghosh Associates Inc**

**S. K. Ghosh Ph.D.,** is a highly-acclaimed speaker and author on seismic-related issues and concrete design and has been involved with the development of national codes and standards.

**Kirsten Zeydel, SE,** is the Director of Design at Nevell Group, Inc. and a Structural Consultant with S.K. Ghosh Associates. She is a licensed Structural Engineer based in Southern California, with over twenty years of experience in structural design. Kirsten has experience with all structural materials.

To register, visit: <https://www.seao.org/events/apr2023/overview-aci-318019-2021-ibc>.

PDH credits: 6 hours.

## YMF BEAM BREAK EVENT RECAP

On March 25, 2023, five teams came together and competed for the most points in a fun beam break competition. Teams and their scores included:

- Flatwise Fury (an Oregon team) with 108 points: Bria DeMeza, Nick Slaven, Tomlinn Cox, and Chase Stewart
- Team VLMK (an Oregon team) with 68 points: Annika Udrys, Chad Miller, Jordan Carneal, and Brandon Wiczak
- Two By Force (a Washington team) with 30 points and a broken beam
- The Unbearable Weight of Massive Talent (an Arizona team) with 49 points and a broken beam
- License to Drill (an Oregon team) 38 points and a broken beam.



# NCSEA UPCOMING LIVE WEBINARS

REGISTER AT: [HTTP://WWW.NCSEA.COM/EDUCATION/WEBINARS/](http://www.ncsea.com/education/webinars/)

**April 11, 2023, 10 am Pacific Time (Fee for Webinar)**

**Seismic Design Series: Cold-Formed Steel-Framed Building on Concrete Podium**

Speaker: Jeff Ellis, P.E., S.E., Simpson Strong-Tie

Many of the questions regarding cold-formed steel-framed seismic force-resisting systems regard which floor framing system should be used, overturning restraint options and their design and detailing, wall stud bracing design and detailing, the use of the overstrength and expected strength factors, and the difference between the latest and previous code design requirements. This presentation will focus on these aspects of design as covered in the SSDM design example. (1.5 PDH)

**April 13, 2023, 10 am Pacific Time (FREE Webinar & PDH)**

**NCSEA Structural Awards—Other Structures: SFU Stadium**

Speaker: Chris Mills, Fast + Epp

SFU Stadium strives to advance the use of mass timber in stadia type construction with the crowning piece being a 10,000 sq. ft. CLT canopy. The talk will cover the process of the award-winning SFU Stadium project from concept to construction. Chris will take a deep dive in to the key technical challenges the team had to overcome to achieve the project team's vision of a seamless floating plane of CLT. Key topics Chris will cover include the structural detailing, procurement and dynamic performance of the as-built construction. (1 PDH)

**April 18, 2023, 10 am Pacific Time (Fee for Webinar)**

**Seismic Design Series: Special Concentrically Braced Frames**

Speaker: Raphael Sabelli, S.E., Walter P. Moore

The presentation includes a review of Example 2 of Volume 4: design of a Special Concentrically Braced Frame (SCBF). The example goes through the steps of building analysis as required by ASCE 7, plastic-mechanism analysis as required by AISC 341 (the Seismic Provisions for Structural Steel Buildings), and member and connection design. Different gusset details and analysis methods are discussed. (1.5 PDH)

**April 20, 2023, 10 am Pacific Time (Fee for Webinar)**

**The Hidden Cost of "Copy & Paste" Engineering**

Speaker: Jason McCool, P.E., Robbins Engineering Consultants

There are many commonalities in design that can be efficiently copied from one project to another to save time and improve output, but we invite trouble into our projects when copying and pasting takes the place of appropriately thorough, intentional design. This webinar will review several shortcomings of structural contract documents repeatedly observed over the course of the author's years doing delegated design for steel fabricators. A common factor behind each of them was "copy and paste engineering," the unexamined reuse of items from previous documents in new drawings or specifications where they introduce errors, contradictions, or simply ambiguity. (1.5 PDH)

**April 25, 2023, 10 am Pacific Time (Fee for Webinar)**

**Seismic Design Series: Eccentrically Braced Frames**

Speaker: Scott M. Adan, Ph.D., P.E., S.E., Adan Engineering

As research of steel lateral-resisting systems has evolved, eccentrically braced frames (EBFs) have emerged as a preferred economical solution to more traditional alternatives. It is essentially a hybrid, combining the stiffness of concentrically braced frames with the ductility and energy dissipation capacity of a moment frame. The design is based on appli-

cable provisions of the American Institute of Steel Construction (AISC) Seismic Provisions for Structural Steel Buildings (AISC 341) and Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications (AISC 358). This presentation will summarize current design provisions and focus on a recently published design example in Volume 4 of the 2015 SEAOC Structural/Seismic Design Manual. (1.5 PDH)

**May 2, 2023, 10 am Pacific Time (Fee for Webinar)**

**Seismic Design Series: Reinforced Concrete Ductile Coupled Walls and Seismic Design of Concrete Walls: SEAOC Seismic Design Manual Volume III, Examples 1 and 2**

Speakers: Rahul Sharma, S.E., Hohbach-Lewin, Inc and Karl Telleen, S.E., Maffei Engineering

**Reinforced Concrete Ductile Coupled Walls**

While the greater ductility of coupled wall lateral systems compared to uncoupled wall lateral systems has been recognized in the engineering community for some time, prior US buildings did not distinguish the two. A Ductile Couple Wall lateral system has now been added to both ACI 318-19 and ASCE 7-22, which will allow engineers to use a higher R-factor of 8 for this system. The system comes with prescriptive requirements that ensure its highly ductile response. This presentation will go over this newly adopted lateral system, its associated design requirements and an illustrative design example on this system which will be included as Design Example 8 in the 2021 IBC SEAOC Seismic Design Manual

**Seismic Design of Concrete Walls: SEAOC Seismic Design Manual Volume III, Examples 1 & 2**

SEAOC Seismic Design Manual Volume III Example 1 covers seismic design of a solid (cantilever) concrete wall, and Example 2 is a concrete wall with openings and coupling beams. Both examples will be presented in parallel, focusing on key concepts including: desired behavior of concrete walls, design for flexure, bar cut-offs and lap splices, design for shear, effect of gravity framing, detailing of wall boundaries, detailing of coupling beams, and wall stiffness. The presentation will draw on observations and lessons learned from past earthquakes, in addition to code requirements and recommendations from research. (1.5 PDH)

**May 9, 2023, 10 am Pacific Time (Fee for Webinar)**

**Seismic Design Series: Steel Deck Diaphragm Design**

Speaker: Matt Eatherton, Ph.D., S.E., Professor of Civil and Environmental Engineering at Virginia Tech

This presentation describes the seismic design of concrete-filled steel deck diaphragms based on the latest research. Design equations in the latest (and in some cases upcoming) code editions along with supporting research will be presented for the two basic limit states of diagonal tension cracking and shear transfer failure. An example will be provided to demonstrate the design of a concrete-filled steel deck diaphragm for these limit states using demands calculated with the alternative diaphragm design provisions in ASCE 7. Calculation of diaphragm deflections and design of shear transfer along collectors will also be discussed. The presentation will conclude with a description of how buildings will perform during earthquakes if designed using these approaches. (1.5 PDH)

There are also recorded webinars that can be purchased for professional development hours (PDHs) online at <https://www.pathlms.com/ncsea/events#on-demand-events-content>

## MARCH CHAPTER MEETING NOTES

March's Chapter meeting featured a presentation by Marc Sokol, M.S, P.E., S.E.. Mr. Sokol spoke about the 1941 forensic analysis of the Tacoma Narrows Bridge failure that occurred in 1940. He spoke about suspension bridge structural principles and load path; the history of bridge movement, the post-collapse structural condition of the bridge, a comparison to other suspension bridges, dynamic wind tunnel testing, how the bridge was re-built, and current AASHTO requirements for design. We'd like to thank Mr. Sokol for presenting such a fascinating topic.



### NCSEA AWARDS JUDGING OPPORTUNITY

SEAO has been asked by NCSEA to provide the judging for this year's NCSEA awards. SEAO needs to provide 15 to 20 judges and are looking for volunteers.

#### Proposed Time Frame

Start reading submissions and scoring projects on June 19 and meet in person for final discussions the week of June 26-30, 2023.

#### Judging Process

NCSEA typically get about 100 projects and a group of NCSEA Past Presidents narrows down the list to approximately 60% of the list. There are eight categories and five areas for the judging criteria scoring. We split up the judging so no one has to read/score more than about 20 projects. It is an online judging system. It typically takes between 4 to 6 hours to do the reading/scoring and we meet for approximately 4 hours.

If you are interested, please reach out to Peder Golberg at [ped-er@jgpierson.com](mailto:ped-er@jgpierson.com).

### NEW SUSTAINABLE DESIGN COMMITTEE

SEAO is pleased to announce the formation of the Sustainable Design Committee.

The primary goal of the committee is to promote sustainable design practices within the profession of structural engineering through leadership, advocacy, outreach, and education. The committee will work closely with the NCSEA Sustainable Design Committee as well as other local SEA Member Organizations to share and disseminate educational material related to sustainable design, local and Federal policy, and sustainable initiatives. As the policy landscape continues to evolve, the committee will advocate for the structural engineering community with respect to local policy and will provide resources to engineers related to policy updates and local markets.

The committee is actively seeking new members. Please reach out to Jo Ann Offill ([joffill@mcknze.com](mailto:joffill@mcknze.com)) for more information.



# EMPLOYMENT OPPORTUNITIES

## EXELTECH

### Lead Structural Engineer

Lacey or Seattle, WA; Beaverton, OR; or Missoula, MT

An exciting opportunity exists for an experienced Lead Structural Engineer to join Exeltech, a leading, multi-discipline engineering consulting firm, in our Lacey or Seattle, WA, Beaverton, OR, or Missoula MT offices. We are looking for a passionate and motivated engineer with an interest in structural building engineering and leading a group of committed professionals.

#### Qualifications/Minimum Requirements:

- BS in Civil/Structural Engineering, advanced degree preferred.
- 8 years of structural design engineering experience
- Experience in seismic design and analysis
- Working knowledge of framing and building systems, including wood, steel, concrete, and masonry
- Self-starter with a desire to work and learn with a great group of engineers and the ability to work in an environment that can occasionally be fast-paced.

Salary Range: \$120-\$135k per year depending on experience. For more information, visit: <https://www.xltech.com/lead-buildings-facilities-structural-engineer>

## CATENA CONSULTING ENGINEERS

### Structural Engineer

Portland, OR

catena consulting engineers provides the personal environment of a small firm while providing the opportunity to work on a variety of projects. Our projects vary in size from a single day's effort to large projects with construction values in excess of \$300 million. You will gain design experience in concrete, steel, timber, and masonry buildings and will work on a wide variety of project types including buildings created for healing, learning, living, and interacting.

Due to the technical complexity and challenge of many of our projects, we seek engineers that hold a Masters degree, and that have a desire to learn, grow, and be challenged. U.S. citizenship is preferred. We are currently seeking engineers at all levels of experience in structural engineering for buildings.

For a detailed advertisement and to submit your resume, visit our website <http://www.catenaengineers.com/opportunities/>

## US ARMY CORPS OF ENGINEERS

### Structural Engineer

Walla Walla, WA

The US Army Corps of Engineers in Walla Walla, WA is looking for a civilian STRUCTURAL/CIVIL ENGINEER who can independently perform all of the following activities: (1) designing structural features through calculations such as: using spreadsheets, and structural analysis/finite element analysis software by following current codes and standard practice; (2) developing structural engineering plans and specifications; (3) performing/documenting field inspections, AND (4) performing technical reviews of structural designs developed by others. Please clearly describing your experience on your resume.

To learn more and apply (U.S. Citizens): <https://www.usajobs.gov/job/706830600>

Salary Range: \$97,169 to \$118,499 per year. Payment of Permanent Change of Station (PCS) costs is authorized!

Please contact Julio Morelos at [Julio.C.Morelos@usace.army.mil](mailto:Julio.C.Morelos@usace.army.mil) with questions about the position.

## PACE ENGINEERS

### Structural Engineer & Project Manager

Lake Oswego, OR

PACE is growing our structural engineering team to deliver unique and challenging project designs for our clients in the public and private sectors. We are recruiting engineers at all experience levels who will be empowered to share and grow their skills within a collaborative and respectful working environment. Our current structural team includes nine (9) SEs or PEs and five (5) structural designers. We partner with our civil engineers and surveyors to complete projects throughout the PNW, the Mountain West, and beyond. Project types include hydraulic structures for potable water systems; roadway, pedestrian, and utility bridges; building and non-building structures; and contractor and vendor services. Our family-first, client service culture cultivates technical, PM, BD, and managerial growth in a hybrid work environment.

PACE is a team of 130 civil and structural engineers, surveyors, and GIS professionals located in Lake Oswego, OR and Kirkland, Everett, and Wenatchee, WA. See [www.paceengrs.com](http://www.paceengrs.com) or contact HR manager, Karmell Dawson at [karmelld@paceengrs.com](mailto:karmelld@paceengrs.com) for more information.

# TRADE SHOW TRIVIA NIGHT

Presented by  
SEAO YMF



April 11th  
at 6:30pm

Monarch Hotel & Conference Center  
12566 SE 93rd Ave, Clackamas OR

Proceeds go toward  
**SEAO Scholarship Fund**

Network and compete with  
engineers for **cash prizes!**

Register your team by **April 9th** at  
[tinyurl.com/SEAOTradeShowTrivia](https://tinyurl.com/SEAOTradeShowTrivia)

Individual registration: \$25

Team registration (up to 5): \$125



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Questions on engineering and general knowledge topics, including:

International Building Code and Oregon Specialty Structural Code

Material Design Codes (e.g. Steel, Concrete, Wood, Aluminum)

Proprietary ESR/IAPMO-Approved Structural Components

Engineering History and Historical Structures

Arts, Humanities, STEM, and/or Civics

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Questions? Reach out to [YMF.SEO@gmail.com](mailto:YMF.SEO@gmail.com)

**SE3 & YMF PRESENT:**

# **SPEED MENTORING**



**NEED A MENTOR?  
WANT TO BE A MENTOR?**

Join us for a **free** 1-time mentorship event focused on immediate guidance, quick advice, and professional networking.

**5:30 PM TO 8:00 PM**

**THURS JULY 20, 2023**

**Rogue Eastside Brewery  
928 SE 9th Ave, Portland, OR 97214**



**REGISTER HERE:**

**<https://tinyurl.com/se3mentor>**

**food and beverage provided | engineers of all levels welcome**

# 2023 SEAO / OACI GOLF TOURNAMENT



**JUL. 19<sup>TH</sup>, 2023**  
**Pumpkin Ridge Golf Club**  
**1:00 PM SHOTGUN START!**

## WHEN:

DATE: Wednesday, July 19<sup>th</sup>  
 SHOTGUN START: 1:00PM  
 SOCIAL HOUR: 6:00PM  
 DINNER & AWARDS: 6:30-7:30PM

## WHERE:

**PUMPKIN RIDGE GOLF COURSE**  
 12930 NW Old Pumpkin Ridge Rd  
 North Plains, OR 97133  
 Phone: (503) 647-4747

## TOURNAMENT:

4-Player Team Scrambles

## DINNER:

A catered dinner will be served after the tournament on-site.

## EVENT DETAILS:

The S.E.A.O. and O.A.C.I. have joined together to hold another day of golf, fun and prizes for 2023! For the first time since 2016, will be heading back to the beautiful, **award winning course and facilities of the Pumpkin Ridge Golf Club!**

Only 20 miles West of Portland, OR, the Pumpkin Ridge Golf Club contains two championship courses, both beautifully etched into the landscape by renowned golf course architect Bob Cupp. The course we'll be playing on, **Ghost Creek, is a par-71, 6,839-yard classic course**, carefully carved through the natural and beautiful Portland wetlands, framed by lush stands of trees, and with dramatic mountain vistas.

There will be a shotgun start at 1:00PM, followed by dinner, beverages, and prizes. We hope that you will come join us and support both organizations. The course also offers a 17-acre practice facility to hone your skills prior to the tournament so come early. Power carts and range balls are included in the golf fee.

Appropriate "Country Club" attire is required:

- Collared Shirts
- No Denim
- Shorts must have a 6" inseam
- Soft spikes only

## CONTACT:

**Jane Ellsworth**  
 ph: (503) 753-3075  
 em: jane@seao.org

## REGISTRATION:

RETURN THIS ENTRY FORM BY JULY 7<sup>th</sup> TO:  
 SEAO  
 PO BOX 2958  
 Vancouver, WA 98668

**\*\*\*\* NO REFUNDS FOR CANCELLATIONS AFTER JULY 7<sup>th</sup> \*\*\*\***

## TEAM FEE LEVELS: choose one...

**PAR LEVEL: \$180/player**  
 (Includes **2 raffle tickets**, green fee, golf cart, driving range, dinner, and Team items\*)

**BIRDE LEVEL: \$200/player**  
 (Includes **5 raffle tickets**, green fee, golf cart, driving range, dinner, and Team items\*)

**\*Included with every team registration: 4 (four) Mulligans total (1 per player) and 1 (one) Five-Foot String, per Team.**

Player Names	Membership	Payment Enclosed
	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____

Pay By MAIL:  Check Included

TOTAL: \$

Name:   
As it appears on Credit Card

Contact Phone #:

Credit Card #:

Credit Card Exp Date:

3-Digit Code:   
On back of Credit Card

Billing Zip Code:

# 2023 SEAO / OACI GOLF TOURNAMENT



# JUL. 19<sup>TH</sup>, 2023 Pumpkin Ridge Golf Club 1:00 PM SHOTGUN START!

## SPONSORSHIP FORM

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

### HOLE SPONSORSHIP (choose any or all of the following)

**HOLE SPONSORSHIP - \$300**  
Comes with individual tee signage and recognition at the on-site dinner.

**PAR-3 SPONSORSHIP - \$750**  
Set your company up near the tee at one of 4 available, 3-par holes and also receive recognition at the on-site dinner.  
(Only available to 4 sponsors)

**DINNER SPONSORSHIP - \$3,000**  
Join the SEAO and OACI by sponsoring the on-site barbecue dinner! Includes tournament registration for a team of four, and distinct recognition from SEAO/OACI at the on-site dinner.

## WE THANK YOU FOR YOUR SUPPORT!

If you or your company would like to sponsor more than the above hole sponsorships, please check any of the additional sponsorship items below, or the option to sponsor/donate your own raffle prize:

### ADDITIONAL SPONSORSHIPS

**LD/KP/Long Putt Hole Sponsor**  
\$150

**On Course Drink Refreshment Sponsor**  
\$500  
*(Host drink cart for one beverage per participant to be redeemed during play)*

**Tee Off Sponsor**  
\$300  
*(Host keg of Micro-brew)*

**19<sup>th</sup> Hole Sponsor**  
\$300  
*(Host keg of Micro-brew)*

**Golf Cart Sponsor**  
\$500  
*(Host the golf carts with a sign in each cart with your company name)*

**Sponsor Provided Raffle Prize:**  
*(ex: Sport Event Seats, Electronics, Golf Gear, Gift Cards, etc)*  
*(If you would like to sponsor by providing your own Raffle Prize, please list and describe any prizes below.)*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please Return This Form A.S.A.P. to:

SEAO  
PO BOX 2958  
Vancouver, WA 98668

Pay By MAIL:  Check Included

TOTAL: \$ \_\_\_\_\_

Name: \_\_\_\_\_  
As it appears on Credit Card

Contact Phone #: \_\_\_\_\_

Credit Card #: \_\_\_\_\_

Credit Card Exp Date: \_\_\_\_\_

3-Digit Code: \_\_\_\_\_  
On back of Credit Card

Billing Zip Code: \_\_\_\_\_



**City of  
Portland, Oregon**  
**Bureau of Development Services**  
FROM CONCEPT TO CONSTRUCTION

Ted Wheeler, Mayor  
Rebecca Esau, Director  
Phone: (503) 823-7300  
Fax: (503) 823-6983  
TTY: (503) 823-6868  
[www.portlandoregon.gov/bds](http://www.portlandoregon.gov/bds)



**EQUIP – Emergency Quick Inspection Program**  
*“Getting Portland Back to Business”*

Buildings and structures in seismically active regions vary in their levels of damage after an event and require a safety evaluation before they can be reoccupied, repaired, or demolished. Depending on the size of the event or aftershock, businesses can be disrupted, and people displaced from work and homes. If businesses can't function, the economic losses impact the entire city. If the city is also without housing, that often leads to displacement and a loss of productivity. If the functionality of facilities is not resumed quickly, both businesses and residents may leave the area which results in a delayed and less complete recovery.

Local building departments are responsible for ensuring the safety of the facilities within their jurisdiction. A building safety evaluation needs to be completed after a seismic event and any subsequent major aftershocks to determine if a structure can be safely re-occupied or if access should be restricted until it is repaired.

There will be a huge demand for building safety evaluations and evaluators after a major earthquake and the process of coordinating evaluations for an entire jurisdiction's facilities will be challenging and a significant departure from daily business functions. To manage this challenge, some communities (i.e., San Francisco, Salt Lake City, and soon Portland) have implemented a quick inspection program that works with large institutional facility owners prior to an event to organize, qualify, and deputize a private team of qualified inspectors. **EQUIP** program applicants create a written inspection plan, identify a qualified team, and submit a detailed application to the City for approval.

**EQUIP** allows building owners and the City to work collaboratively and creates an emergency plan that benefits all parties. The Bureau of Development Services is preparing to launch **EQUIP** in the City of Portland; it would allow qualified and approved private inspection teams to respond quickly after a seismic event. City resources could then be applied to other structures and tasks to speed recovery in the region.

December 2022