

Newsletter of the Structural Engineers Association of Oregon

#### SEAO

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September 2017 Volume 17 Issue 8

## Upcoming SEAO Meetings and Events:

# Wednesday, September 27, 2017: SEAO Excellence in Structural Engineering Awards and Dinner Meeting

Topic: PDX – Current Projects and Future Expansion Planning Speaker: Ken Willhite, PE & Tom Wharton, PE Location: Sentinel Hotel, The Billiard Room, 614 SW 11th Ave., Portland, OR Time: 5:30pm PDH Credit: 1 hour See page 2 for additional information.

#### Friday, October 6, 2017: YMF Lunch Meeting

Location: KPFF Time: 12:00pm Please RSVP! See page 4 for additional YMF information.

Wednesday 11 to Thursday 14, October, 2017: NCSEA Structural Engineering Summit Location: Washington D.C. See ncsea.com/meetings/annualconference for additional information.

# Thursday, October 19, 2017: SEAO Fall Seminar— Frequently Misunderstood Seismic & Wind Related Topics of ASCE7

Location: Sheraton Hotel & Conference Center, 8235 NE Airport Way, Portland, OR Time: 8:30am-4:30pm PDH Credit: 6 hours See **seao.org** for additional information.

## DUES REMINDER

Annual dues for SEAO membership are due on **October 31, 2017**. You can make checks payable to SEAO and mail to: 9220 SW Barbur Blvd, No. 119 Portland, OR 97219

Or renew online using a credit card by going to: <u>www.seao.org</u>

Renewals: Member (licensed PE in Oregon): \$102 Affiliate Member: \$95 Student Member: \$16.50 Retired Members: \$25

Membership must be current (dues paid) to have your name included in our annual roster.

To update our records, please be sure that we have your correct address, name of your company, current phone numbers, and your email address. This will guarantee that you are receiving all correspondence and information from SEAO. You can update your information online, or if you have any questions contact jane@seao.org.

SEAO has a twitter account and can be followed at @SEAOregon.



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

Send membership inquiries to:

9220 SW Barbur Blvd. No. 119 **PMB #336** Portland, OR 97219

#### **BOARD OF DIRECTORS**

President Kevin McCormick **Miller Consulting Engineers** Ph: 503.246.1250 kevin@miller-se.com

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**Past President** Gary Lewis Lewis & Van Vleet Ph: 503.885.8605 gjlewis@lvvi.com

**Executive Secretary** Jane Ellsworth **SEAO Staff** Ph: 503.753.3075 jane@seao.org

### SEPTEMBER AWARDS DINNER MEETING ANNOUNCEMENT WEDNESDAY, SEPTEMBER 27, 2017

Please join SEAO for the 3rd Annual Excellence in Structural Engineering Awards presentation. This awards program was created to acknowledge outstanding projects and structural engineering advancement by members. Winning projects will be recognized as part of the September 27th dinner meeting.

Submission categories include: New Buildings Under \$10M. New Buildings Over \$10M. Renovation/Retrofit, and Special Use Structures. Projects will be judged by a panel of invited judges from multiple fields related to design and construction based on the following project criteria:

- Creativity of structural design 1.
- 2. 3. Complexity of design criteria
- Ingenuity of design for efficient use of materials and construction
- 4. Fulfillment of client's/ owners needs or expectations
- 5. Suitability of the structure for its environment

In addition to the Awards and Speaker we will be installing the new SEAO Board. See page 4 for Board info.

#### TOPIC: Portland International Airport – Current Projects and Future Expansion Planning

The Portland international airport has seen tremendous growth over the last 30 years. This has led to multiple expansion projects including concourse D/E addition in the late 80s, the TAP project in the 90s, the TES project (concourse C & D) in the early 2000's and finally the long-term parking garage in the late 2000's. Air traffic is expected to continue to increase over the next 30 years. To accommodate this growth several large infrastructure projects are being undertaken to expand capacity and increase seismic resilience. This presentation will provide an overview of recent/current projects as well as an overview of the master plan for the next 30 years. The presentation will be given by two Port of Portland engineers who are overseeing some of these projects.

#### PRESENTER BIOS:

#### Ken Willhite. PE

Engineering Senior Manager at the Port of Portland

BSCE University of San Diego



Ken is currently the Engineering Senior Manager of Development Services at the Port; a position he has enjoyed for the past 2 years. With 9 full-time employees, the Development Services group provides project management services to deliver the Port's Capital Program. Ken's project managers deliver both large and small projects in a wide range of disciplines, civil, electrical, mechanical, HVAC, navigation, and/or equipment purchases. When workload exceeds capacity of in-house resources, consultants are utilized to serve as extensions of staff. Ken's previous work at the Port includes 6 years as the manager of Design Services, 5 years as a Project Manager and 9 years as a Project Engineer. He spent 5 years in the early 1990's as a Transportation Engineer for Caltrans in the Sacramento area. Ken likes to manage large, diverse, cross-functional teams in the delivery of engineering projects or programs. He is a practitioner of PMI and a licensed PMP in addition to maintaining Engineering licenses in both Oregon and California.

Tom Wharton, PE Project Engineer at the Port of Portland

BSCE Portland State University



Tom Wharton has worked as a project engineer in a civil/structural capacity for the Port since 2008. Tom works on a wide variety of projects at both the airport and marine terminals, including the Port's Seismic Resiliency efforts. Tom holds a Bachelor of Science in Civil Engineering from Portland State University.

#### DETAILS:

Location: Sentinel Hotel, 614 SW 11th Ave., Portland, OR

5:30 pm — Check in and social \$32 — Prepaid Members Time: Cost: 6:15 pm — Dinner \$20 — Prepaid YMF Members 6:30 pm - Program \$42 - Prepaid Non-Members Free — Students

#### Reservations: Pre-registration is required for all.

You can register and pay online at www.seao.org before noon, Friday, September 22. You can also register with Jane Ellsworth via phone at (503)753-3075 or via Email: jane@seao.org. Note: No-shows will be billed.

PDH Credit: One PDH has been recommended for this program.

#### **SEAO COMMITTEES**

<u>CODE ADVISORY COMMITTEE</u> Seismic *Reid Zimmerma* 

reid.zimmerman@kpff.com Wind

*Jim Riemenschneider* jimr@vlmk.com

Snow Load Andy Stember andy@jasenginc.com

Code *Eric Watson* eric@miller-se.com

Vintage Building *Wade Younie* wyounie@dci-engineers.com

Special Inspections *Eric Watson* eric@miller-se.com

Mass Timber *Eric McDonnell* Eric.McDonnell@kpff.com

STRUCTURAL ENGINEERS EMERGENCY RESPONSE (SEER) Shawn Stevenson sstevenson@morrisonhershfield.com

PROGRAM COMMITTEE Monthly Meetings David Gilroy dgilroy@strongtie.com

Awards *Brynn Adkins* brynn@wdyi.com

Golf Tournament *Stephen Stenberg* steez07@yahoo.com

Conferences *Kevin McCormick* kevin@miller-se.com

ADVOCACY COMMITTEE Website

Seth Thomas seth.thomas@kpff.com

Engineers Week *Michelle Juarez* michelle@miller-se.com

Young Member Forum Kate Pfretzschner kathryn.pfretzschner@kpff.com

*Deanna Kuhlman* dkuhlman@mcknze.com

CONTINUING EDUCATION <u>COMMITTEE</u> Seminars *Andy Stember* andy@jasenginc.com

**MEMBERSHIP COMMITTEE** 

Newsletter Sarah McClelland smcclelland@moldedfiberglass.com

Roster *Jane Ellsworth* jane@seao.org

**DELEGATES** 

NCSEA & WCSEA/NWC Seth Thomas seth.thomas@kpff.com

*Amit Kumar (Alternate)* amit.kumar@portlandoregon.com

#### PRESIDENTS MESSAGE BY: KEVIN McCormick, S.E.

#### SEAO Members,

It is hard to believe that this is my final president's message. It seems like last month I was writing the first one. The saying "time flies when you are having fun" has never been so true. Summertime has come and gone and the children have gone back to school. I hope all of you had a chance to relax and celebrate with family and friends.



As I look back over this last year, it has been relatively un-eventful. It is easy to be the President of an organization such as SEAO. Our members are intelligent and can usually get their points across in a

reasonable amount of time. Volunteering for an organization such as this is great. The board members are fantastic and have made my time on the board very memorable. I encourage all of you to get involved in either a committee or lend some of you time to the board. We still need volunteers for many committees.

In working with the board this last year, I was extremely grateful to have Jane Ellsworth as our constant. She has knowledge and a great memory that helped keep us informed and kept us from hitting some of the pitfalls that had been previously encountered by others in the past. Our departing board members will be missed. Lindsey Weisgerber was our secretary and worked with Jane to keep us up to date. Pat Merriman has been our director for the past two years and his wisdom and input was always appreciated. Gary Lewis has finished up as Past President and true to his final message, his "backseat driving" has been excellent. I give them all a hearty Thank You, because I know they helped make my job easier.

I always have tried to find something unique in the world of engineering, so I leave you with this last one. Engineering for an elevator can be somewhat easy and not very exciting, except when it is supposed to carry 50 people at a time and rise up 1070 feet up the side of a cliff. The Bailong elevator which is also known as the Hundred Dragons Elevator carries over 18,000 people per day. It is a huge sightseeing attraction in Zhangjiajie, China. Not for the faint of heart, but the views are supposed to be breathtaking. I can imagine that the engineering challenges were tremendous.

Our new incoming board members are bringing along some new and useful experience. Norm Farris will be the New Vice President, Dusty Andrews will be the new Secretary and Chad Norvell will be the new Director. I welcome you all and thank you for lending your valuable time to SEAO. I look forward to being part of this board for one more year and I know that we are in great hands with Seth at the lead.

Best wishes to you all and thank you. -Kevin McCormick

## VENDOR ADVERTISING

SEAO is now accepting vendor advertising!

Cost of a full page ad running for one month: \$250 - Members \$350 - Non Members

For more information, contact Jane Ellsworth at jane@seao.org.

## SEAO/OACI GOLF TOURNAMENT RECAP

#### Winners

1<sup>st</sup> place winners: - James Wells, Dave Denham, Eric Vermillion, Doug Gilmer – OACI Group

2<sup>nd</sup> place winners: Jeff Kron, Jim Lang, Michael Wagy, Mike Parkin – OACI Group

**3<sup>rd</sup> place winners**: Ken Rust, Colby Anderson, Tony Jenkins, Stephen Stenberg – SEAO Group

For the 4<sup>th</sup> year in a row Ken Rust, Colby Anderson, Tony Jenkins & Stephen Stenberg won the SEAO golf trophy.

- Closest to the Pin #3 hole James Wells
- Closest to the pin #11 hole Dave Dillon
- Long Drive #6 hole Jeff Kron
- Long Drive #18 hole Andy Harris

#### **Raffle winners**

- Wheel Barrow Bryon Allen WR Meadows
- Apple Watch Jeff Schroeder Masons Supply
- Fishing Trip Ryan Thread Calportland
- Mariner Tickets –Jeff Kalka Conco
- TV Kevin McCormick Miller Consulting Engineers
- Garmin Golf Watch Jeremy Quinn Conco
- Yeti Cooler Jeff Dodd Hoffman
- Power Washer Troy Gustafson
- Traeger Pete Lucarelli CalPortland
- Kegerator Jeremy Quinn Conco

## 2017-2018 SEAO BOARD

The following members have been elected to this year's Board and will be installed at this month's meeting:

President: Seth Thomas Vice President: Norm Faris Secretary: Dusty Andrews Treasurer: Phil Davis Directors: JoMarie Farrell (2nd year of two year term) Chad Norvell

## SEISMIC EVENTS

#### **SEAO Seminar:**

Thursday, October 19, 2017

# Frequently Misunderstood Seismic & Wind Related Topics of ASCE 7.

**Location:** Sheraton Portland Airport Hotel and Conference Center

PDH Credit: 6 hours (in person), 5 hours (viewing video)

#### Speakers:

information.

See attached flyer for more

- S.K. Gosh, Ph.D., President, S.K. Gosh Associates Inc.
- Sandra Hyde, PE, Senior Staff Engineer, ICC Code
   Development



#### YOUNG MEMBER FORUM ACTIVITIES BY: KATE PFRETZSCHNER AND DEANNA KUHLMAN

### Upcoming YMF Events:

Friday October 6<sup>th</sup> – Lunch Meeting Location: KPFF Time: 12:00pm to 1:00pm Lunch will be provided. Please RSVP!

#### YMF Website:

Please visit our website for more information on YMF events: seao.org/committees/advocacy/ymf

## MASS TIMBER/CLT COMMITTEE

The SEAO Mass Timber/CLT Committee has been continuing to update the resource document provided on the Mass Timber/CLT Committee page on the SEAO website.

Please let us know if you have any additional documentation that might be added to the shared Excel document. The resource document includes website links, codes and design guides, published research, research in progress, non-technical publications, a list of CLT suppliers, CLT connector information, and product data reports. It is a living document **free** for your information and use as an SEAO member.

The committee continues to meet regularly to discuss current developments in the mass timber movement and collaborate with SEAOC on the development of a mass timber design guide. One item of interest is that NHERI Tall Wood research project is currently studying the development and validation of a resilience-based seismic design methodology for tall wood buildings. They are currently in phase 1 testing for research that is planned over a 4-year period. On the shake table down at UCSD in San Diego they have constructed a full scale two-story mass timber building with an open floor plan, resilient rocking wall system, and high aspect ratio CLT floor diaphragms. This summer they will conduct a series of full-scale shake table testing of a 10-story CLT building to validate the design methodology. More information and updates on the NHERI Tall Wood project can be found on their project website (<u>nheritallwood.mines.edu</u>). You can also visit the UCSD website (<u>nheri.ucsd.edu</u>) to see information on the shake table, watch live webcam of ongoing testing and view an archive of past shake table tests on all material types.

Other news of note is that the Framework building has received its permit for construction in the City of Portland. Once completed Framework will be the nation's first high-rise building constructed out of wood. Framework will be 11-story, 142-foot tall mixed-use building located in the Pearl District. Construction is expected to begin this fall and is scheduled to open in the winter of 2018.

For additional information visit the Framework website (<u>frameworkportland.com</u>)



## WEBSITE UPDATE

The SEAO board is looking at overhauling the website in the next year, as our current website is becoming obsolete. The board is soliciting input from the membership to help guide the overhaul process. We would like to know what features the current website has that you like, dislike, and wish worked better. In addition, what would you like to see added, reorganized, or changed? This website is one of the tools SEAO can offer its membership, and we want to make it as useful as possible for all our members.

If you have any ideas, please contact Seth Thomas (<u>seth.thomas@kpff.com</u>).

## 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 announce a simple way for Q&A's with technical committees. Email questions to 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 <u>www.seao.org</u>.

Committees include: Seismic, Wind, Snow, Code, Vintage Building, and Special Inspections.

## EMPLOYMENT OPPORTUNITIES

#### <u>SMG</u> Structural Engineer Portland, OR

Smith Monroe Gray Engineers (SMG) is a structural design firm with a focus on heavy industrial and construction engineering. We are looking to add a structural engineer to our skilled team of dedicated, innovative professionals whose intelligent, cost-effective designs and excellent service have earned SMG a highly respected reputation in the field of engineering. The number of long-term employees at SMG reflects a high level of job satisfaction.

SMG is looking for a licensed PE for our Portland, OR office. Strong communications skills are a must and graduate level Structural Engineering degree with a SE license is preferred. SMG offers a competitive wage, bonus and benefit package in a family-friendly work environment.

If you are interested in a career at SMG, please email your resume to <a href="mailto:smg@smgengr.com">smg@smgengr.com</a>.

#### <u>KPFF</u> Structural Engineer Portland, OR

KPFF Portland Structural is looking for Experienced Structural Engineers who are motivated and interested in an opportunity for growth. KPFF is about freedom to work on what inspires you. Our engineers work on a vast spectrum of projects located around the globe: from anchorage of mechanical systems to complex, non-linear analysis of high-rise structures. We're a group of dedicated, friendly, hard-working professionals with the benefits of a large and stable firm but none of the red tape that comes with it. At KPFF you will work individually and collaboratively in the design and construction process for a wide array of challenging projects. You will work closely with talented engineers, BIM / CAD technicians, architects, project managers, contractors and client teams. Providing first-class service to our clients is what we're about.

If this sounds like an environment you could thrive in, visit <u>www.kpff.com/careers</u>.

## SEAO - Frequently Misunderstood Seismic & Wind Related Topics of ASCE 7

Hosted by the Structural Engineers Association of Oregon (SEAO)

Date:	Thursday, October 19, 2017 – 8:30 AM to 4:30 PM Registration Opens at 7:30 AM (Lunch Included)				
Cost:	<ul> <li>\$200 SEAO Member (Includes Class Notes) \$250 Non-member</li> <li>\$25 Late Fee (if registration received after Oct. 12, 2017)</li> <li>Students \$65 (Includes Notes) – Must show current student ID</li> <li>No refunds after 12:00 noon Thursday, Oct. 12, 2017</li> </ul>				
	Register early; Maximum 100 people	Program to be Taped by Limelight Video			
Location:	Sheraton Portland Airport	8235 NE Airport Way			
	-	Portland, Oregon			
		(503) 249-7606			
Continuing Education:SEAO has recommended this seminar for 6 PDHs (5 PDHs for Viewing Video)					
Speakers:	S. K. Ghosh, Ph.D., President, S. K. Ghosh Associates Inc. Sandra Hyde, PE, Senior Staff Engineer, ICC Code Development				
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.					
	Sandra Hyde, PE, is with the International Code Council (ICC) Code Development Group. She develops books and seminars about the structural provisions of the International Building Code (IBC).				

FREQUENTLY MISUNDERSTOOD Seismic & Wind Related ASCE 7-10 PROVISIONS ASCE 7-10 provisions related to the following topics have generated many questions from users of the document. Important clarifications will be provided, which should lead to a better understanding of the provisions.

- 1. Enclosure Classification for Wind Design

- Enclosure Classification for Wind Design
   Gust Effect Factor
   Rigid vs Flexible Diaphragms
   Redundancy
   Drift and Building Separation
   Seismic analysis Procedure Selection
   Seismic Load Effects Including Overstrength Factor
   Structural Walls and Their Anchorage
   Griemie & Wind Design of Design of
- 9. Seismic & Wind Design of Parapets
- 10. Structural Irregularities and Direction of Seismic Loading

#### Questions: Andy Stember (503) 657-9800

ASCE '	7-10 Misu	inderstood	Seismic	& Win	d Provisions
Registratio	on Form				
<b>Register O</b>	nline at <u>www.</u>	<u>seao.org</u> or			
Send to:	SEAO			Make (	<b>Checks Payable to:</b>

SEAO

PO Box 2958

Vancouver, WA 98668

(503)	753-3075	
Firm Name:		
Firm Address:		
Phone		
Name of Attendee(s)		
# of Attendee(s)	@ \$200.00 / each = (Nonmember \$250.00)	\$
# of Late Fees	(1000000000000000000000000000000000000	\$
# of Students	@ \$65.00 / each =	\$
# of Videos	@ \$175.00 / each =	\$
	Total Enclosed =	\$

## Go to www.seao.org to register online

Credit card payment		
Name (as appears on card)		
Credit Card #		exp
3 digit code:	Billing Zip Code of Card: _	
Cardholder Signature		