



# EQUILIBRIUM

April 2018

Newsletter of the Seattle Chapter  
Structural Engineers Association of Washington

## Seattle Chapter Leadership

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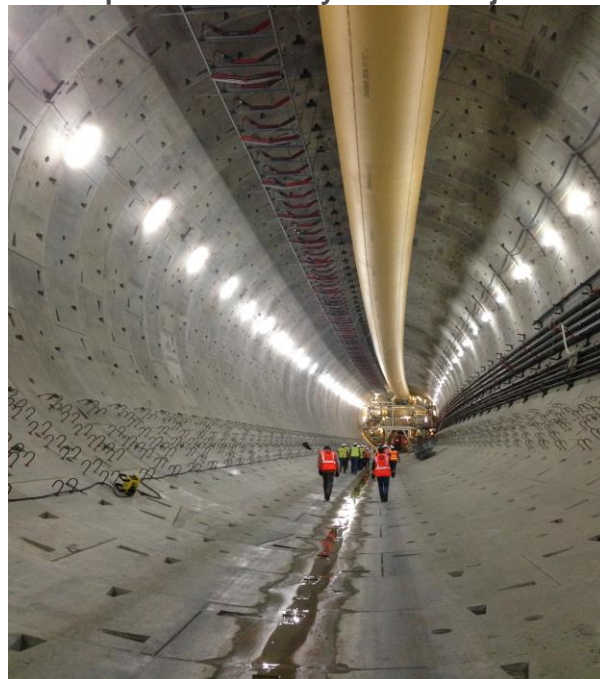
Marcus Freeman

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## Seattle Chapter April Dinner Meeting

Seattle & Southwest Chapter Joint Meeting  
Topic: Alaskan Way Tunnel Project



Tuesday, April 24  
5:30 pm to 8:15 pm

**Galliano's SeaTac**  
16435 Military Rd S.  
SeaTac, WA

Our presentation will be the experience and insights from the Chief Tunnel Inspector from Seattle Tunnel Partners on the Alaskan Way Tunnel Project. It's been nearly a year since the tunneling machine Bertha broke through into the disassembly pit near Seattle Center. Join us to learn about this monumental

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project and get keen insights from the 1.7-mile journey beneath Seattle.

**Speaker: Carl Neagoy, Chief Tunnel Inspector**

5:00-6:00 Registration/Networking  
6:00-6:40 Dinner  
6:45-7:00 Welcome/Announcements  
7:00-8:15 Program

**Registration Fees:**

\$40 - Members (\$35 early bird)  
\$45 - Non-members & Guests  
\$35 - YMG (\$30 early bird)  
\$15 - Students

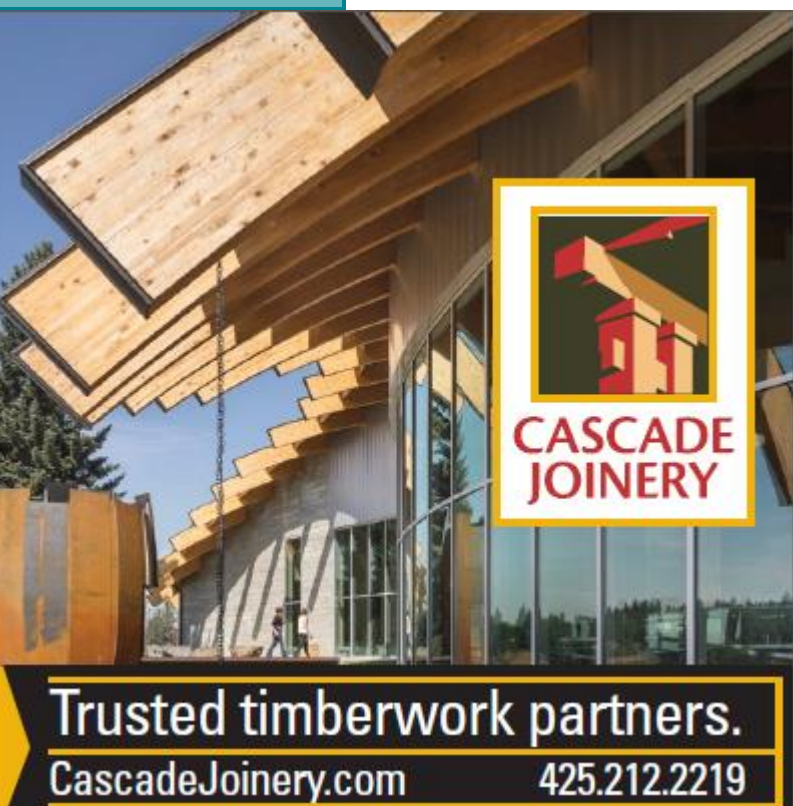
**Register Now!**

## March Seattle Chapter Dinner Meeting Recap

*By Tim Lewis*

On Tuesday, March 13th, SEAW co-hosted the March Dinner meeting with ASCE on the topic of the Sound Transit Northgate Light Rail Extension. SEAW and ASCE welcomed Robert Nichols who is Sound Transit's corridor design manager responsible for the completion of design and construction support for the Northgate Link Extension.

Robert began by outlining a brief summary of Seattle's growth and the importance of mass transit in the Puget Sound Region. About 1,500 people are moving to Seattle each week. Light rail trains are an effective way to move those people because a 4-car light rail train is equivalent to 10 buses and 500 single occupancy vehicles. The current Sound Transit Link Light Rail system consists of 22 stations. Sound Transit has plans to grow that number to 83 stations, reaching 50 stations by 2024. [Read More](#)



**NCSEA Survey**

**Register Now – ATC 20/45 and Cal OES SAP Class in Seattle –**

The **NCSEA Structural Engineering Engagement and Equity (SE3) Committee** is currently administering a nationwide survey of structural engineering professionals. This survey is designed to provide valuable information about our profession regarding demographics, compensation, satisfaction, and engagement. It will be one of the largest comprehensive nationwide surveys of structural engineering professionals to date, and NCSEA **invites you to contribute to this project by completing the survey below.**

This project began in 2015 when SEAONC (Structural Engineers Association of Northern California) funded a committee to study engagement and equity in the structural engineering profession. In 2016, this group administered their first national survey of over 1,100 structural engineering professionals. Findings from this study included insight into why engineers leave the profession, the importance of mentorship, and the existence of a nuanced gender pay gap.

The first survey of its kind was done in 2016. If you are interested, read the [full report](#).

In mid-2017, an SE3 Committee was created at the national level through NCSEA with the primary goal of administering a similar nationwide study of structural engineering professionals every two years. This biennial survey will focus on measuring engagement and equity with the goal of providing data and best practices to help ensure that every structural engineering professional has a positive experience within our profession.

Over the past seven months, SE3 Committee has been developing the 2018 version of this survey, and it is now live!

**Take the  
Survey Now!**

## Structures Congress 2018

## April 27

*By Joyce Lem, Chair, Disaster Prep & Response Committee*

A class on ATC 20/45 and the Cal OES Safety Assessment Program (SAP) will be held on **April 27** in Seattle. This eight-hour training on Post-Disaster Building Safety Evaluation Procedures will help participants develop the skills to properly assess buildings for occupancy following a major earthquake, flood, or wind event. The training will be based on the California Office of Emergency Services (Cal OES) Safety Assessment Program (SAP), incorporating material from ATC-20 (Post-Earthquake Safety Evaluation of Buildings) and ATC-45 (Safety Evaluation of Buildings after Windstorms and Floods).

**Register Now!**

## Save the Date – SEAW Seattle Chapter May Dinner Meeting

**Topic:** The Pacific Northwest Strategy for Earthquake Early Warning (EEW) Outreach, Education, and Training

**Date:** Tuesday, May 22

**Location:** Hotel Monaco, 1101 Fourth Avenue, Seattle, WA 98101

EEW systems combine earthquake science with monitoring systems that detect and monitor earthquakes. When an earthquake attains a specified level, an EEW system issues an alert that may allow automated systems and people to take protective action before potentially damaging shaking arrives. In the U.S., EEW pairs the development and implementation of the ShakeAlert system with activities that promote end-user awareness, education, and training on life-saving actions. The purpose of this Pacific Northwest Strategy for EEW Outreach, Education, and Training is to define a path forward for state and local government in Oregon and Washington to contribute to the successful development, implementation, and preparedness activities associated with EEW in the U.S.

**Speaker: Maximilian Dixon, MUP, MIPM**  
**Earthquake Program Manager**  
**Washington State Emergency Management Division**  
**Washington Military Department**





### Fort Worth, Texas, April 19–21

This year, ASCE SEI is putting on Structures Congress 2018 in Fort Worth Texas, April 19–21. Attendees will listen to keynote speakers Guillermo Trotti and Dr. Dava Newman open the event on Thursday as they present on *Designing Advanced Structures for Human Space Exploration*. Keynote Ashraf Habibullah presents Friday on *Next Generation Structural Engineering*, and keynote Greg Gervens closes the event Saturday presenting on *Engineering and Leadership*. Between plenary keynote sessions, there will be opportunities to attend presentations on more than 12 different tracks, including, bridges, buildings, natural disasters, and professional practice. There's a session for just about any specialty. Last, but not least, attendees will have opportunities throughout the Congress to meet and mingle with structural colleagues from the U.S. and abroad at the exhibit hall, fun receptions, and throughout the whole event.

For more information, [explore the preliminary program](#).

## NCSEA Member Login Refresh

Have you noticed those two unassuming words in the upper right-hand corner of the NCSEA's web site? **MEMBER LOGIN**. If you are a member of **SEAW**, then you have an *additional* tangible benefit – access to NCSEA's Member Portal, a members-only section of the website – at no extra cost.

It is simple to use, just go to the [NCSEA website](#). If you haven't logged in in a long time, a lot has changed...in a good way! If you have recently logged in, nothing has changed. If you have never logged in, click on those two words in the corner of the main web page, and use the same e-mail address you used when joining or renewing your **SEAW** membership and the password NCSEA1234. First-time users will be asked to create a new password – and you

## Southwest Chapter News

Look for Southwest Chapter News in the future.

## Spokane Chapter News

Look for Spokane Chapter News in the future.

## South Central Chapter News

By Jill Shuttleworth



SC Chapter of SEAW donated to the Mid-Columbia Science and Engineering Fair held on March 8, 2018. Three award-winning students received cash awards for their structural engineering projects. The grand prize was awarded to Harry Rahil, a 7th grader from Harrison Middle School, for his project entitled "Does The Different Type Of Foundation Affect the Stability of a Shelter?"

Second place prizes were awarded to Isabella Haag, a 6th grader from Christ the King Middle School, for "Shake Shack" and Sebastian Herreid, a 7th grader from West Valley Jr High, for "Does Soaking Different Types of Wood in Saltwater Affect the Strength of the Wood?"

Thanks to Willy Williams and Levi Gilbert SEAW student members for helping with the judging for special awards.

re in! Also, you can contact NCSEA if you have a problem with our login. [Read More](#)

## Building the Next Story with SEFW

By Angela Gottula Twining



Build the Next Story

www.sefw.org

The Structural Engineers Foundation of Washington is excited to announce details for its annual giving campaign, "Foundation for the Future." This year's theme is *Build the Next Story* and the event runs from April to June.

Since the inception of SEFW in 2010, the Board of Directors and volunteers have been collecting stories of structural engineering enthusiasm.

There was the time when a local 10-year-old boy got to meet his origami hero, Robert Lang, at the Fall Forum and learned engineering in origami was a viable career choice. [Read More](#)

## 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  
The EEC upcoming meeting dates are May 8, 2018.  
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 - Pete Opsahl  
To sign up to volunteer or to mentor, [visit the SEFW page](#).
- Sustainability Committee – Kyle Steuck
- Refresher Committee – Mark Whiteley
- [Public Information Committee](#) – Darrell Staaleson
- [Disaster Preparation/Response Committee](#) – Joyce Lem

## YMG Corner

By Alejandro Esparza



March has been a busy month for the YMG. We had the Sika tour and the Timber tour in Vancouver, BC and the BASF social event in Seattle, WA. On Friday March 9, a small group of young engineers toured the Sika plant that is run by only four persons but supplies Western Canada and the Pacific Northwest. We learned about the different type of products they make and how they make them. Check their website to learn more about how Sika can help with your current project! [Read More](#)

## Disaster Preparation/ Response Committee

By Joyce Lem

### What's Up with WAsafe - An Update from the Disaster Prep and Response Committee

Hurray! As State Board President, Chun Lau recently signed the Memorandum of Understanding (MOU) between WAsafe and the Washington Military Department (WMD). This MOU commits the state Emergency Management Division (part of WMD) and the professional organizations that comprise WAsafe (the American Institute of Architects Washington Council, the Washington Association of Building Officials, and SEAW) to working with each other to develop and promote the WAsafe program. This represents a HUGE step forward as WAsafe becomes a formally recognized component of our state's emergency management program. Our next step is sending WAsafe coordinators to the Foundations Course taught at and by the State,

- **WABO Liaison Committee – Charlie Griffes**  
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](mailto:charlie@ctengineering.com).  
[White Paper 6b - 2017 on Deferred Submittals](#)
- **Wind Engineering Committee – Scott Douglas**
- **Technology Taskforce – Morgan Wiese**
- **Membership Task Group – Jill Shuttleworth**
- **Continuing Education Committee – Adam Ailvers**
- **Scholarship Committee – Kevin Solberg**

## Outreach Committee Report

The Outreach Committee (OC) has had a very busy past six months. SEAW and the OC have made a commitment to support WABS, Washington Alliance for Better Schools, and their STEM activities. WABS covers 11 different Puget Sound area school districts that translate into approximately 250,000 students. The OC participates in the “After School STEM Academy” that promotes hands-on STEM learning experiences in an afterschool environment and staffing booths at various school district STEM Expos promoting structural engineering. The Outreach Committee is currently looking for both committee members and volunteers at various events. Further information can be found on our website. [Read More](#)

## Public Information Committee Report

*By Darrell Staaleson, Chair*

I will be stepping down as Chair of the Public Information Committee (P.I.C.) and Equilibrium Editor as of June 2018 in order to focus on my duties as Seattle Chapter President. This is an opportunity for you to step up and make a contribution to our association and the structural engineering profession. I will help/mentor as needed or wanted. I encourage you to take it and make it your own.

I will leave you with another picture of TR showing what it feels like when you are done with writing and editing and finally kick an addition out the door.

Emergency Operations Center (SEOC)'s at Camp Murray on April 12. The Foundations class will introduce us to the SEOC organization and processes. [Read More](#)

## From the Editor

*By Darrell Staaleson*



Equilibrium publication Team:

Darrell Staaleson, Editor

Katie Olleman

Zohrah Ali

Allison Tran - Grammar, spelling, and watching out for you'll-never-believe-how-they-spelled-that!

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 in community services; or share some construction site photos, and talk about lessons learned.

“A Picture and a Paragraph,” and please use the Article Submittal Form provided. Please note that when I say, “picture” I mean an actual “picture,” and not a blank space where the “picture” should be. The picture needs a caption along with the names of the people in the photo.

Please submit your articles in Word format using the [Article Template](#).

**CORRECTIONS:**

None that I can remember.

**ACKNOWLEDGMENTS:**

The Editor would like to acknowledge the good form in the article by Alejandro Esparza, “YMG Corner – March





## Employment Opportunities

**Structural Engineer** – Integrus Architecture  
**Structural Engineer** – AJP Engineering  
**Senior Engineer / Project Manager** – Forell/Elsesser Engineers  
**Staff Engineer / Project Engineer** – Swenson Say Faget  
**Capital Projects Engineer** – City of Bothell  
**Mid-level Structural Engineer** – Morrison-Maierle  
**Sr. Project Manager** – Seattle Structural PS Inc.  
**Mid-level Design Engineer** – Seattle Structural PS Inc.  
**Structural Engineer** – Complete Design  
**Structural Engineer** – WRK Engineers  
**Structural Staff Engineer** – LSB Consulting Engineer  
**Structural Engineer** – Fast + Epp

[Learn More](#)

## Help Wanted

Located across the street from Safeco Field, Lund Opsahl is a growing structural engineering firm that provides a wide spectrum of services, including planning, design, seismic and damage

Events. “The article was well written and it had pictures – PICTURES! – and pictures with good composition and a title.

### April Puzzle:

Test your Geek. Give the correct or at least a marginally respectable interpretation of a Sci-Fi Geek response to the following statements and name the movie or book and the character they come from. So, good luck! And Klaatu baradanicto!

For example, **ladies**, if some guy says, “Shouldn’t there be a safety light?” Your correct response should be, “Safety lights are for dudes!” – Holtzmann from Ghostbusters 2017.



Check out our [SEAW Facebook page](#) for Clues.

1. When you hear a horse whiney in the distance, you say...
2. When you’re clearly well over the age of 21 with a full beard – a full grey beard - and the guy at Walmart wants to see your driver’s license to buy cheap wine, you say...
3. When someone asks you to turn on the lights, you say...
4. When an engineer dressed in city office clothes comes to the job site and tells you, the contractor, that your work does not conform and then tells you to stop work, and you can’t say out loud what you really want to say, you could say...
5. When someone says, “Let’s get nachos.” You say...
6. When you get in your truck and your wife takes all day to get in and you want to get a move on, you say...
7. When you light the fire on your barbeque, you say...
8. When you are changing fluorescent light bulbs, you hold up one and say...

assessments, upgrades, additions, tenant improvements, and construction support for a variety of new and existing building types in the Pacific Northwest. Our reputation as creative innovators and technical experts is built on responsive service, collaborative teamwork, and lasting relationships. Our firm's size offers early opportunities to work on challenging projects and encourages exciting career growth uncommon at larger firms, especially for the ambitious.

Currently, we are looking for:

- Structural Engineers of all skill levels
- Full-time Administrator/Receptionist to be our first point of contact for visitors and telephone calls
- Experienced CAD/BIM Technician

Benefits:

- Competitive benefits and salaries
- Health, Dental, and Vision Insurance/Health Savings Account
- Performance-based bonuses
- Flexible working hours
- 401(k) with matching contribution
- Profit Sharing Plan
- PTO, and holidays
- Group activities and team events
- In-House education programs
- Free parking
- (Did we say we're next to Safeco Field?!)

Please visit our website, [www.lundopsahl.com](http://www.lundopsahl.com), for additional information and job descriptions for each of these positions. Inquires and resumes may be sent to [careers@lundopsahl.com](mailto:careers@lundopsahl.com).

## 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](#)

## Upcoming Events

April 19: [Structures Congress](#)  
April 19: [South Central Chapter Meeting](#)  
April 24: [Seattle and Southwest Chapter Meeting](#)

9. When you pour a glass of "Green Goodness Drink – a flavor extravaganza – with antioxidants" you hold up the glass (And using, of course, all your training from the "William Shatner School of over-acting") and say...
10. When you sit down to watch TV after dinner and someone says, "What should we watch?" You say
11. Extra credit: When a contractor starts arguing with you about your design, and you just overheard them talking before about how they hate Sci-Fi and think Star Trek is stupid and think Dr. Who is boring and then they said they don't really need an engineer except for the stamp, you say...

(Clues can be found on the [SEAW Facebook Page](#))

The first SEAW member to respond on our SEAW Facebook Page or at the next dinner meeting – **with the most correct or even reasonable close answers** - will get coffee and a Danish pastry.

March Puzzle:

In this story, a young man grows up on another planet and is rescued and brought back to Earth. He finds he is the heir to a vast fortune. He brings back with him the philosophy of the aliens who raised him and the ability to make bad thing, and bad people, "go away." What novel tells this story? Who is the author? And what is the name of the central teaching of the alien philosophy and what does it translate to in English?

Clue: Read on.

"With my cross-bow,  
I shot the albatross.

'Twas right, said they, such birds to slay,  
That bring the fog and mist.

Day after day, day after day,  
We stuck, nor breath nor motion;  
As idle as a painted ship  
Upon a painted ocean.

No winner again! And I thought this would be the easiest puzzle ever for anyone who has ever read any Science Fiction. I hope you knew that the clue was from "The Rime of the Ancient Mariner." And the next stanza after "Upon a painted ocean" began, "Water, water, everywhere...]



April 26: [Olympia ASCE Chapter Meeting](#)  
April 27: [Post-Disaster Building Safety Evaluation Training - Seattle](#)  
May 17: [South Central Chapter Meeting](#)  
May 22: [Seattle Chapter Dinner Meeting](#)



Engraving by [Gustave Doré](#) for an 1876 edition of the poem. "The Albatross," depicts 17 sailors on the deck of a wooden ship facing an albatross. Icicles hang from the rigging.

**Answer:** "Stranger in a Strange Land" by Robert Heinlein. The name of the central teaching is, "grok." And grok means to drink [water].