STATE EQUILIBRIUM

Newsletter of the
Structural Engineers Association of Washington

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In the Issue

1. April 28th Dinner Meeting is Postponed
2. 2020 Seattle Chapter Board of Directors Candidates
3. SEA NW Conference *"Innovation in Structural Engineering"*
4. 2018 IBC Seminar
5. YMG Corner
6. Coping with Coronavirus: Design Firm Challenges
7. State Building Code Adoption Delay
8. Firewalls 101
9. Disaster Prep Response Committee

April 28th Dinner Meeting is Postponed!

SEAW is taking proactive steps recommended by Public Health – Seattle & King County to protect our community by slowing the spread of the novel coronavirus (COVID-19) and reducing the number of people infected.

One of these steps, is canceling large events or meetings through May 4th or until we re-evaluate information provided by the Public Health Department.

SEAW has postponed our April 28th, 2020 dinner meeting at the Hotel Monaco. The Board will look into reschedule this meeting in the future.

10. SEFW Published 2019 Annual Report
11. New Risk Category Occupant Load Calculations Code Interpretation
12. Cascadia Solid Wood Series
13. State and Chapter Committee Reports
14. Membership Postings
15. Employment Opportunities
16. Upcoming Events
17. From the Editor



2020 Seattle Chapter Board of Director Candidates!

Click here to cast your vote - Deadline to vote is April 24, 2020!

Results will be announced on April 28th.

President Candidate
Mike Visser, PE, SE



Michael D. (Mike) Visser, PE, SE, is the founding Principal of Visser Engineering. He came to Seattle in 1993 after working in Chicago, Washington D.C., and Los Angeles. He worked at the Austin Company in Renton prior to founding Visser Engineering.

Mike is licensed in Washington, Oregon, California and Idaho. His experience ranges from heavy industrial (aircraft hangers, manufacturing facilities and nuclear power plants) to commercial (retail, movie theaters) and residential (apartments, condominiums and single-family residences).

He has experience with design in aluminum, steel, concrete, masonry and wood.

Mike joined SEAW in 1994, has taught the seismic portion of the SEAW Refresher Course since 2009, and has been on the SEAW Board of Directors since 2017.

"It is an honor to have been asked to serve as the Seattle Chapter President. My involvement in SEAW has benefited me in many ways over the years - I have found the more I am involved, the more I get back. My personal goal is to see SEAW grow to be a more of a go-to resource for its members."

Vice-President Candidate
Shalini Prochazka



Shalini Prochazka, P.E., S.E is an Associate Principal at Armour Unsderfer Engineering. Her structural engineering experience includes a wide variety of projects including seismic retrofit of commercial buildings and seismic support of mechanical, electrical, plumbing, retail buildings, architectural and curtain wall components. From 2014 until 2017 she worked for Simpson Strong-Tie as the branch engineer where her primary focus was providing engineering and application support to sales and customers involved in product and literature development.

She served on the board of the SEAW Seattle Chapter from 2016 through 2019. In addition, during her involvement she served on the SEAW Outreach Committee to promote structural engineering among K-12 students. Ms. Prochazka is currently a member of the WABO/SEAW Liaison committee and manages

the Seattle chapter of WiSE (Women in Structural Engineering).

"Involvement with SEAW is a pleasure; because strength comes from community, collectively we can achieve more and SEAW provides a platform to achieve this purpose. My goal is to serve the SEAW community by increasing member participation and support the goals of the committees for the advancement of the structural engineering profession."

Director Candidates - 2 Open Positions



Owen Kohashi, PE, SE is the Structural Engineering Supervisor at Seattle City Light. He moved to Seattle to attend the University of Washington and worked at Magnusson Klemencic Associates for 18 years prior to working at City Light for the last 9 years. Owen joined SEAW in 1992 and was a founding member of the Sustainability Committee.

Owen is licensed in Washington, and is also a LEED Accredited Professional, a PMI Project Management Professional, and an AWS Certified Weld Inspector. He has a wide range of experience with different materials such as concrete, PT, wood, and masonry, and has a special expertise in steel design.

He has experience designing many different building types, including cultural and performing arts buildings, higher education buildings, libraries, convention centers, office buildings, parking garages, retail, hospitals, stadiums, and hangars. In addition to building design, his work at City Light has allowed him to experience engineering of less common structures, such as hydroelectric dams, powerhouses, substations, transmission towers, and underground structures.

"I would be honored and pleased to serve on the Board of Directors, and feel that I can bring a new voice to the Seattle Chapter Board that represents not only the majority of members that are consulting engineers designing buildings, but also those members that are practicing structural engineering outside of the mainstream."



Jeffrey J. (Jeff) Dragovich, PhD, PE, SE, F.ACIis a consulting structural engineer based in Shoreline. He is a Seattle native who completed his undergraduate work at Seattle University, and graduate school at the University of Illinois.

Jeff is a licensed PE and SE in Washington and California and SE in Illinois, a fellow of the American Concrete Institute (F.ACI), and a voting member of ASCE 41, ACI 318-H (the seismic subcommittee of the ACI 318), and ACI 369.

His 24 years of experience ranges from working with structural engineering consulting firms, aerospace, academia, and as a research structural engineer in NEHRP at the National Institute of Standards and Technology.

In 2012 he returned to the Seattle and has been working ever since as a consultant to design firms in the area. His expertise covers concrete and steel structures, particularly seismic design, nonlinear analysis, and software development.

Jeff joined SEAW in 2012. "I have found the Seattle chapter meetings informative and a great way to stay connected to the structural engineering community. As a board member I hope to expand my involvement with SEAW and support subcommittee work."

Click here to cast your vote - Deadline to vote is April 24, 2020!
Results will be announced on April 28th.

SEA NW Conference *"Innovation in Structural Engineering"*

The Seattle Chapter of the Structural Engineers Association of Washington is delighted to host the 2020 Northwest Conference, September 17-18 at The Westin Seattle, in the heart of downtown!

Click here to book your $199/per night room at The Westin Seattle.

The 2020 Northwest Conference theme, “Innovation in Structural Engineering”, 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 8 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. The conference will also feature networking events and a trade show with up to 31 exhibitors.

Fees to attend:
SEA Members $375.00
Non-Members $475.00
Young Members (Under 35) $300.00

Click here to register to attend!

Interested in displaying? As an exhibitor, here's what you can expect:
- One draped exhibit table with chairs.
- 31 tables are available on the same floor and in proximity to all technical sessions.
- Cost will include entry for two exhibitor staff.
- Recognition in Equilibrium monthly newsletter and conference smartphone app Attendify.

Click here to register to display!

SEAW Northwest Conference Committee
Chun Lau, Chair I Darrell Staaleson I Jessica Lim I Shalini Prochazka I John Gunn I Jim Mattison I Scott Douglas I Sean Augustino I Katie Bohocky

2018 IBC Seminar

By the Education Committee

**** Due to the on-going Covid-19 health crisis, the Education Committee has changed this all-day seminar into an all-day webinar only. Please note that the cost of the webinar has been reduced by $50 for members and non-members. Those who have already registered at the $240/$340 levels will receive a refund check of $50, SEAW administration will contact you ****

Are you ready for the 2018 IBC? The SEAW Education Committee is hosting an all-day webinar about the changes to the structural provisions of the 2018 IBC which is scheduled for adoption by the State of Washington on November 1st of 2020. This webinar is a continuation of the September 2019 seminar that presented the changes to ASCE 7-16 and ASCE 41-17 and will focus on the materials standards. It will take place on Saturday May 16, 2020. Save the date!

The May webinar will cover:
- Chapter 17: Special Inspections
- Chapter 21: Masonry (TMS 402/602-2016)
- Chapter 22: Steel
  - AISC 360-16
  - AISC 341-16
  - AISC 303-16
  - AISI S240-15 & S400-15/S1-16
- Chapter 23: Wood (NDS 2018)
- Tall Wood Building provisions
- City of Seattle amendments
- City of Seattle URM ordinance

Presenters:
Ed Huston, PE, SE, Smith & Huston Inc.
Jon Siu, PE, SE, Department of Construction & Inspections, City of Seattle
Nancy Devine, PE, SE, Department of Construction & Inspections, City of Seattle
Erik Lofthus, PE, SE, KPFF
Hans-Erik Blomgren, PE, SE, P.Eng. Struct.Eng., Katerra
James Farley, PE, SE, MC Squared
Alexander Lang, PE, SE, LEED AP, Magnusson Klemencic Associates
Taylor LaForge, PE, SE, Magnusson Klemencic Associates

This webinar will qualify for 5 to 6.5 PDH’s (exact duration is still being determined) for the person registered only. A PDF of the notes will be emailed the day before the webinar.
Time: 9:00 am - 4:30 pm (may end sooner)
Location: Online only (due to the current health crisis)

Cost per person: Members $190; Non-Members $290; Students $50; Notes only $100 (pdf only)
Sponsor Name in notes: an additional $150.

YMG Corner

By Linda Ji

We hope everyone is doing well, adjusting to the new working-from-home environment and staying safe. While events may be cancelled, the YMG board is still working to help our young members connect and learn.

The deadline for nominations has passed, but if you would still like to contribute, please email **seawymg@gmail.com**.

Coping with Coronavirus: Design Firm Challenges

By AP - Hall & Company

A/E Resource Webinar Announcement

- Coping with Coronavirus: Design Firm Challenges
- Date: Thursday, April 23rd, 2020
- Time: 11:00 AM to 12:00 PM
- Pacific Presenter: David Ericksen, Esq. Severson & Werson

See full **PDF document here**.

Register Now!!!

Contact Info: (360) 598-5010
jsharpe@hallandcompany.com

State Building Code Adoption Delay

By John Gunn

Governor Jay Inslee has issued Proclamation 20-40, delaying the adoption of the new State Building Code in Washington until November 1st, 2020 as a result of the COVID-19 outbreak. The implementation of the orders of the Washington State Building Code Council (SBCC) adopting amendments to the State Building Code on July 1st, 2020 are therefore suspended.

A link to the full Proclamation is located here:
https://sbcc.wa.gov/news/governor-extends-state-building-code-implementation-date

Firewalls 101

By Larry Harris, P.E., S.E. – LSB Consulting Engineers

Fire walls are nothing new, but for me, they have always been a bit of a mystery. That is, until my recent experience as part of the design team for a new high school in Kennewick. I got the opportunity to fully immerse myself in the life-safety benefits of fire walls and their numerous technical complexities there.

By definition, a fire wall is a fire-resistant structure that restricts the spread of a fire and has sufficient structural stability under fire conditions to allow the collapse of construction on either side of the wall without compromising the integrity of the wall. They are the last line of defense against the spread of a fire.

From a planning standpoint, fire walls serve to create separate buildings or subdivide buildings so that different construction types can be used. In other words, all code provisions that are based on allowable area apply individually to the “building” on each side of the fire wall, thus permitting the use of less-restrictive and less-expensive construction types.

In the United States, requirements governing the design and implementation of fire walls are found in Section 706 of the International Building Code and, by reference, NFPA 221 “Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls”.

Types of Fire Walls

In terms of structural configurations, there are several ways of designing and constructing fire walls to

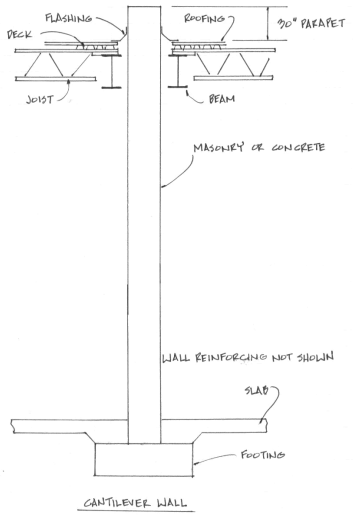
satisfy fire ratings and structural-stability requirements. Among the systems used are cantilevered or freestanding walls, laterally supported walls, tied walls, and double-wall construction.

Cantilevered or Freestanding Walls
This type of wall has no ties to the building structure and is entirely self-supported. They are usually installed where there is a complete break in the structural framework.

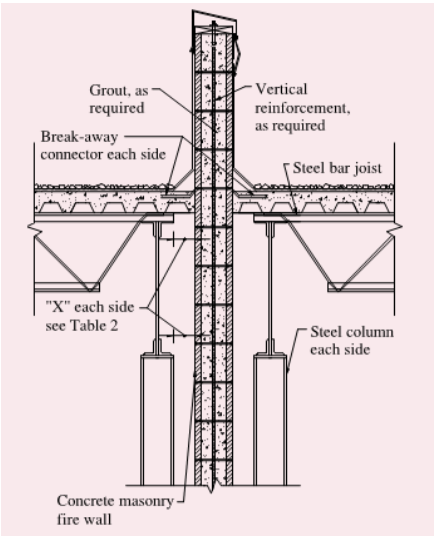
Laterally Supported Walls
This type of wall relies fully on the building structure for lateral support. They use connectors that are often proprietary and designed to melt or break-away when exposed to fire conditions, thus allowing the structure on the fire side of the wall to collapse without pulling the wall down. The intact connectors on the side of the wall opposite the fire provide the stability.

Tied Walls
Similar to laterally supported walls, this type of wall relies fully on the building structure for lateral support. The difference is that the structural framework on one side of the wall is tied to the framework on the other side. To ensure the stability of the wall, forces due to the collapse of the structure on the fire side of the wall are resisted by the strength and stiffness of the structure on the opposite side.

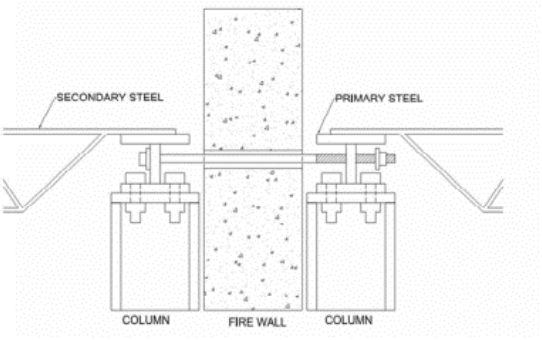
Double-Wall Construction
This type of system is comparatively easy to design and construct. It uses two independent rated walls placed side by side with a minimum separation between them. Each wall is laterally supported by the adjacent structure using conventional methods of detailing. When one of the walls is pulled down by collapse during a fire event, the other wall remains intact.



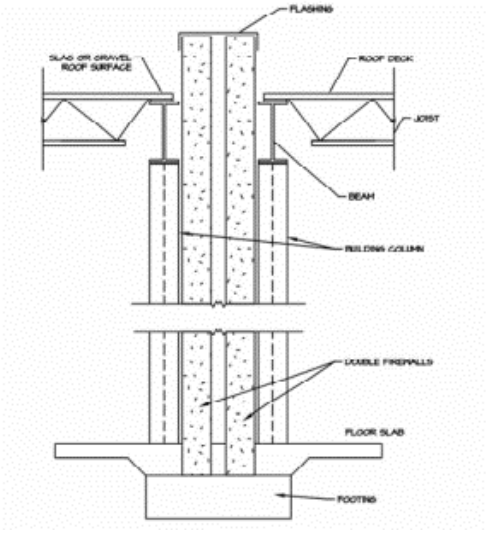
Cantilevered/Freestanding Walls



Laterally Supported Walls



Tied Walls



Double-wall Construction

To learn more about fire walls, please see the following sources:
1. International Building Code
2. “Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls”, NFPA 221

3. “Detailing Concrete Masonry Fire Walls”, NCMA TEK 5-8B
4. “Understanding Fire Wall Basics”, PDHonline.org
5. “Gypsum Area Separation Firewalls”, GA-620-2011, Gypsum Association

Disaster Prep/Response Committee – WAsafe Update

By Joyce Lem, DPRC Chair

Thanks to everyone who attended the Post-Disaster Building Safety Assessment (BSA) training on March 5. One attendee suggested holding a seminar (webinar) by those who had deployed to Puerto Rico, Alaska, Haiti and other places where events occurred to perform assessments. If you are one of them, please contact me by email **jmlem@live.com**.

I’m excited to announce that our first set of Identification Cards is in progress. The Washington Association of Building Officials (WABO) will be “making” the cards. However, WABO is prioritizing dealing with the COVID-19 pandemic, so this task will be delayed. We will keep you posted through Equilibrium or another vehicle.

Don’t forget to register at **https://www.waserv.org** to join as a WAsafe Evaluator if you’ve taken the WAsafe BSA training or Cal OES SAP Evaluator training. For Cal OES SAP Evaluators, we require taking an online module on the WAsafe Concept of Operations – Cal OES is for California – but you can start the enrollment process and enter your profile info and the WAserv electronic database will save it for you.

SEFW Publishes 2019 Annual Report

By Angela Gottula Twining

At the end of March, the Structural Engineers Foundation of Washington, a 501(c)3 charitable organization, published its 2019 Annual Report to donors on **www.sefw.org**. Some highlights from the report include:

- Full list of individual and corporate donors
- Spotlight on the SEAW Scholarship Winners in 2019, plus updated program scholarship statistics
- New donation button for the Special Wind Region Study, supporting the SEAW Wind Committee’s research efforts
- Board of Directors additions and changes
- Financial stewardship report
- And more!

The report can be seen on the SEFW website, at**sefw.org/annual-report-2019.html**.



Thank you to all donors who contributed in 2019 and made it a resoundingly successful year. SEFW has

experienced growth and success due to the support of SEAW and SEAW members, as well as others inside and outside the industry and local community.

April kicks off the SEFW annual spring fundraising campaign – be on the lookout for information about the campaign and please include SEFW in your annual giving activities! SEFW is pleased to be included in the GiveBIG local giving campaign once again, which this year will be **May 6, 2020**.

Donations to SEFW can be made in several ways (mail, text, online), outlined on the website at **https://sefw.org/donate.html**.

Thank you for your continued support!



New Risk Category Occupant Load Calculations Code Interpretation

By Nancy H. Devine, P.E., S.E.; SDCI Engineering and Technical Codes Manager

On February 27, 2020, SDCI issued a code interpretation of Seattle Building Code section 1604.5,**Risk Category Occupant Load Calculations**. This code interpretation will help applicants calculate the building occupant load to determine the building's risk category. The code interpretation allows a reduction in gross area for certain occupancy groups. It allows for some areas to be excluded from the calculation based on non-simultaneous occupancy. A code modification is required to use this code interpretation.

Questions about the interpretation should be directed to:
Ardel Jala
ardel.jala@seattle.gov

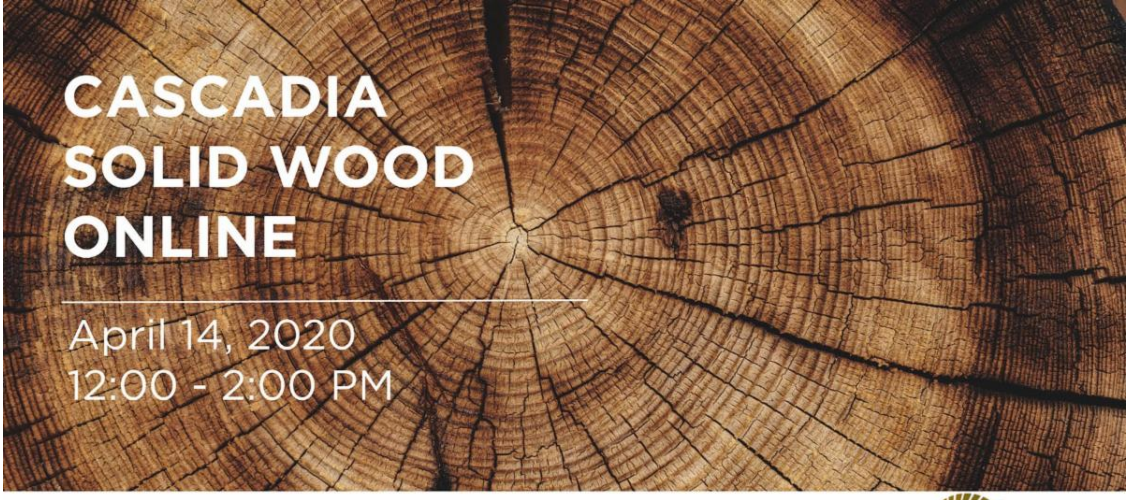
Go to this address if the link to the code section above does not work:
http://www.seattle.gov/Documents/Departments/SDCI/Codes/2015SBC16045RiskCategoryOccupantLoad.pdf

Cascadia Solid Wood Series (Now Online!)

By Sunni Wissmer

Want to build your next project with structural timber?
Have questions about FSC and sustainable wood options?
Join the International Living Future Institute's Cascadia GBC for an exciting combined event in April co-hosted by FSC and Whole Trees.

For more information and to register follow the link here:**https://living-future.org/events/cascadia-solid-wood-series/**



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 - Gino Mazzotti
- To receive emails about volunteer opportunities please sign up on the **SEAW Outreach page**
- Sustainability Committee – Chris Jeseritz
- 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 **matts@cplinc.com**.
- Technology Taskforce – Morgan Wiese
- Membership Task Group – Jill Shuttleworth
- Continuing Education Committee – Nathalie Boeholt
- Scholarship Committee – Kevin Solberg

State Building Code Council

The Washington State Building Code Council is looking for a Council Member representative from east of the Cascade Crest to fill a recently opened position. The position has the following commitment: Assuming there are eight council meetings a year and that a meeting takes a full day, I would assume an average of around 10 hours per meeting per year for prep and attendance, not including travel. Calling in is okay but attendance in person is preferred.

The state pays a per diem for council meetings.

Here is the link to the State Building Code Council website: **https://apps.des.wa.gov/SBCC/.**

If you have interest or questions about the open position, please contact Logun Rasmussen, of the Spokane chapter of SEAW: **Logun@glrengineers.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**

New Members:

- Franz Kogler
- Tiffany La
- Peter White

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**

Lund Opsahl

Located across the street from T-Mobile Park, Lund Opsahl is a growing structural engineering firm that provides a wide spectrum of services, including planning, design, seismic and damage 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 with minimum of three (3) years experience.

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 T-Mobile Park?!)

Please visit our **website**, for additional information and job descriptions for each of these positions. Inquires and resumes may be sent to **careers@lundopsahl.com**.

Seattle Structural

Opportunities for Mid-level Design Engineer and Senior Project Manager

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

Seattle Structural is an Equal Opportunity Employer.
We are filling two positions. Candidates must meet the following requirements:

- **Mid-level Designer**: 5+ years' experience.
- **Senior Project Manager**: 10+ years' experience.
- BS or MS in Structural, Civil/Structural, or Architectural Engineering.
- Experience in steel and concrete buildings, lateral analysis, deep foundations, and marine projects are desired.
- Working knowledge of CAD and Revit preferred.
- Strong emphasis on client service.
- Excellent communication skills.
- Strong technical skills.

Please address inquiries to:
Howard Burton, President
Seattle Structural PS Inc.

3131 Elliott Ave STE 600A
Seattle, WA 98121

HBurton@SeattleStructural.com

MLA Engineering

MLA Engineering has an exciting opportunity for an experienced**Structural Engineer** to join our consulting and design firm in Seattle, WA. Our diverse projects require critical thinking and creativity that is cultivated through our problem-solving approach in a small group environment.

We design new buildings and renovate existing structures in concrete, structural steel, masonry, and wood-framed structures. Our projects vary from small to large-size buildings and facilities. In addition to our building design and governmental projects, including county and state infrastructure, MLA specializes in the structural design of national and international zoos and aquariums.
Qualifications required for this **Structural Engineer** position include:

- Master's Degree in Civil Engineering with Structural emphasis;
- Minimum of 3 years of experience working in a consulting design office;
- PE license preferred;
- Strong technical and analytical skills;
- Intuitive and practical;
- Practical use of REVIT as a design tool;
- Proficient with structural software such as RISA, ETABS, SAP2000;
- Excellent communication skills;
- Motivated to advance your effectiveness as an engineer.

Our work environment encourages creativity, teamwork, and professional growth. To learn more about MLA, please visit our website at: www.mlaengineering.com
Apply: Send PDF (resume and cover letter) to info@mlaengineering.com
Location: Convenient Downtown Seattle location with excellent public transit options; potential opportunities in New York City.
Benefits: Top line Medical, Dental & Vision insurance, *generous* HRA account, 401K Plan w/4% matching, PTO & Sick LV, and professional training
Work Schedule: Flexible
Salary: Competitive + bonuses
Projects: Diverse and often unique

MLA Engineering is an equal opportunity employer. We encourage women and minority candidates to apply.

Upcoming Events

- May 16: 2018 IBC Seminar by Education Comittee
- September 17: **SEA NW Conference**

For more details and registration on events visit website.

From the Editor.



APR 2020

Equilibrium Publication Team:

John Gunn, Editor
Darrell Staaleson, Past Editor
Zohrah Ali
Allison Tran
Blaine Sanchez
Lisette Terry
Shivang Gupta
Chase Young
Alisha Khadka

COVID-19 is affecting all of us. In this time of social distancing, I encourage our members to interact with one another on our Facebook and LinkedIn pages. Stay safe and we will get through this together.

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.

April Puzzle:

When refering to a credit score, what does FICO stand for?

Clue: It’s a trade name on the New York Stock Exchange.

Bonus: What is the base FICO score range?

Look on the SEAW Facebook Page for a picture clue!

The first SEAW member to respond on our SEAW Facebook Page –***with a correct and full answer***- will get a prize.

March Puzzle:

Which country, including its territories, has the most time zones?

Clue: Think islands!

Bonus: How many time zones does it have?

Picture clue:



Answer:

France has the most timezones at 12! The picture clue has Saint Martin circled, an island in the Caribbean shared by France and the Netherlands.

https://en.wikipedia.org/wiki/List_of_time_zones_by_country