ASCE SEATTLE SECTION

SEATTLE SECTION NEWSLETTER

May 2016
Volume 51 No. 9

Section Officers

October 1, 2015—September 30, 2016

ASCE Seattle Section Meeting

Wednesday, May 11, 2016

Place: Mirabella, 116 Fairview Ave N, Seattle, WA 98109

Cost: Early Bird Rates end after Wednesday, May 4
$45 ($40 early bird) for General Admission
$20 ($15 early bird) for students and free agents

Registration closes Monday, May 9

Meal: Dinner buffet chosen by Mirabella's Chef, to include 2 entrees,1 vegetable, 1 starch, 1 salad, dinner rolls and dessert. Vegetarian and gluten free entrees available upon request.

5:30 p.m.	Networking/Social
6:00 p.m.	Dinner
7:00 p.m.	Program

Click here to register.

For assistance with online registration, please contact Don Nguyen (House & Hospitality Co-Chair) at dnng@b-t.com

Direct questions or comments regarding meetings to Section President Evan Sheesley at seattleascepresident@gmail.com

Program: Celebration of Members – Student and Life Member Program

This special dinner program features ASCE Student and Life Members as well as a presentation of awards and scholarship. We will begin the evening with by the student paper award winners Seattle University civil engineering programs and the University of Washington concrete canoe winners. This is a great opportunity to see the new challenges our current students are taking on and to show support for the students as they embark on their careers.

The evening will wind down with honoring 2016 ASCE Life Members. A Life Member is an individual who has made a lifetime commitment to ASCE and the civil engineering profession by remaining a member for the full length of their professional career. Life members have been dues paying members for at least 35 years and have had a minimum of 10 years of continuous membership.

The next newsletter deadline is:
5:00 p.m.
Friday, May 20, 2016

~~~~~~~

Newsletter Editor:
Todd Crandell
seattleASCEnews@gmail.com
Phone: (206) 459-2250

CHANGE OF ADDRESS:
All changes to your address (including your newsletter e-mail address) should be provided to ASCE at www.asce.org or:
1801 Alexander Bell Drive,
Reston, VA 20191-4400.
The Seattle Section will receive your updated information from ASCE.

AMERICAN SOCIETY OF CIVIL ENGINEERS, SEATTLE SECTION
http://www.seattleasce.org

Volume 51 No. 9, May 2016
Published 10 times a year

ASCE SEATTLE SECTION NEWSLETTER ADVERTISING RATES

Employment Ads:

$75 for one month on web site and in the newsletter; $50 per month for subsequent months

Display Ads:

Costs are for one year (10 issues):

Business Card size	$100
Quarter page	$250
Half Page	$500
Full Page	$1,000

To place an ad or for more information, contact the editor at seattleASCEnews@gmail.com.

President's Column

By Pooja Jain, PE, PEng, SE, COPRI Seattle Chapter Chair

COPRI Seattle Chapter Members Plan Ports ''16 Conference

On June 15, 2015, the ASCE Seattle Section signed a Memorandum of Understanding with ASCE's Coasts, Oceans, Ports & Rivers Institute (COPRI) to re-brand the existing Seattle Section Ports and Harbors Committee to "COPRI Seattle Chapter.". With about 400 members, the Chapter hosts monthly meetings with an emphasis on networking and knowledge sharing via technical presentations. The Chapter Committee is:

Pooja Jain, PE, PEng, SE, Moffatt & Nichol — Chair
Younes Nouri, PhD, PE, Hatch Mott MacDonald — Vice Chair
Ruta Ikauniece, CH2M — Event Coordinator
Morgan McArthur, PE, GeoEngineers, Inc. — Event Coordinator
Hans Hurn, Confluence Environmental Company — Treasurer

The Chapter members are active on COPRI's National Ports and Harbor Committee. In addition a variety of technical publications, the national committee is responsible for planning a national triennial Ports Conference. The four-day conference, with close to 800 attendees, features over 170 technical presentations, numerous short courses, and keynote speakers all centered on Port-related topics from environmental analysis to terminal planning, to innovative structural design of Port infrastructure.

Seattle Chapter members have been an integral part of the planning and success of the Port Conference throughout its 39-year history. Ports '13 was held in Seattle with Tom McCollough of Seattle's Moffatt & Nichol serving as Chairperson. Shannon Kinsella of Everett's Reid Middleton is Chairperson for the upcoming Ports '16 conference. Other local Seattle chapter members on the Ports '16 planning committee include Don Oates, Pooja Jain, Mike Wray, Chris Cornell, Monique Anderson, and Thais Howard.

Ports '16 is now six weeks away, scheduled for June 12-15 in New Orleans in the heart of the French Quarter! From the opening plenary with the legendary Dr. Robert Ballard, discoverer of the Titanic and world ocean explorer, to the short courses and technical program, to the reception at the Port of New Orleans, Mardi Gras World Gala, and technical tours of the 2014 Outstanding Civil Engineering Achievement (OCEA) National Award

*See **President's Column** on page 3*
~~~~~~~

President's Column *(continued from page 2)*

winning Inner Harbor Navigation Canal Lake Borgne Surge Barrier, the local COPRI Seattle Chapter members hope the conference will be a resounding success for all those who attend, exhibit at, and sponsor the conference.

Exhibit and sponsorships opportunities for the conference are now available. Registration for the Ports '16 conference is also available online at www.portsconference.org.

If you would like to be added to the email list for future local COPRI Seattle Chapter meetings, please email Pooja Jain at PJain@moffattnichol.com.

University Mentor Night—Help Needed

If you are interested in being a mentor for a night for college students, the Puget Sound Engineering Council (PSEC) needs your help! The purpose of the mentor night activity has been to bring as many practicing engineers together with as many students as possible. We are trying to inspire the students, most of whom are freshmen and sophomores as well as high school seniors, toward a career in engineering. The mentor night allows engineers to relay their experience in the profession and answer questions posed by students. The event will be kicked off with a brief introduction of the engineering disciplines represented by the volunteers followed by open forum where the students visit various tables and converse with the mentors. Mentors are encouraged to bring a sample of work that will fit on a 30"X30" table top for potential discussion with the students.

The following provide a list of spring events and signup links for the events:

- Bellevue College – May 3, 11 am to 1 pm – http://www.pseconline.org/2016/03/09/tue-may-3rd-2016-bellevue-college-engineer-mentor-lunch/
- Shoreline Community College – May 11, 6 pm to 8 pm – http://www.eventbrite.com/e/2016-shoreline-community-college-engineering-mentor-night-tickets-22740355014?ref=ebtnebregn

Thank you for your support.

ASCE Seattle Section 2016-17 Board of Directors Election

Seattle Section Members are electing candidates for ASCE Seattle Section's 2016 - 2017 open board positions. The election is from May 1 to May 20.

The following positions are open:

- President Elect
- Treasurer
- Director of Technical Committees

Members are encouraged to review candidate biographies and vote at this link: http://goo.gl/forms/P27XedoRct.

Only active (dues paying) members of the ASCE Seattle Section may vote in this election. If you have any questions, please contact Tony Nguyen, Section Secretary, at tony.nguyen@hdrinc.com.

Thank you.

Order of the Engineer Ring Ceremony (deadline May 6)

The Order of the Engineer Ring Ceremony will be on Tuesday, May 31, 2016, between noon and 1 p.m. in Bannan Engineering Room 311 at Seattle University. Anyone interested in participating should mail the following information to Joy Crevier, whose name and address is shown below:

Full name, affiliation (e.g., UW student, working professional), ring size (little pinkie of the working hand), and $13 cash or check made payable to the Dept of Civil and Environmental Engineering.

Joy Crevier
Dept of Civil Engineering
Seattle University
901 12th Ave,
Seattle, WA 98122

All payments should be received by May 6. No refunds if you are a no-show; Participants should be present at the event to receive the ring (i.e., cannot pick up the ring after the event, although you could attend a future event at Seattle University at no charge).

For more information, contact Amanda Schweickert at Amanda.Schweickert@abam.com.

Seattle Section 2016 Life Members

By Stefanie Herzstein, PE, PTOE, M.ASCE, Seattle Section Immediate Past President

The Seattle Section would like to congratulate the 17 members who attained Life Member status in 2016. A Life Member is an individual who has made a lifetime commitment to ASCE and the civil engineering profession by remaining a member for the full length of their professional career. Life members have been dues paying members for at least 35 years and have had a minimum of 10 years of continuous membership. The Class of 2016 Seattle Section Life Members are:

- John P. Ahlers, Aff.M.ASCE
- Michael Bailey, P.E., M.ASCE
- Donald Barg, P.E., M.ASCE
- Jerry Dowd, P.E., M.ASCE
- Garry Horvitz, P.E., M.ASCE
- Steven D. Kitterman, P.E., M.ASCE
- Howard E. Lee, P.E., M.ASCE
- Daniel W. Mageau, P.E., M.ASCE
- Leonard Montague, P.E., M.ASCE
- R Alan Murray, P.E., M.ASCE
- Stephen Nelson, P.E., M.ASCE
- Henry O'Bourke, P.E., M.ASCE
- Elmer W. Ozolin, P.E., M.ASCE
- Vincent J. Perrone, P.E., M.ASCE
- Jay B. Spady, P.E., M.ASCE
- Dennis R. Stettler, P.E., M.ASCE
- Raymond Walton, Ph.D., P.E., D.WRE, F.ASCE

Life Members were recently honored at our May 11, 2016 dinner meeting. The Section thanks you for your dedication to the Society and our profession.

Employment Notices

To post an employment notice in the newsletter and on the Section's web site, please contact the newsletter editor in advance of the monthly deadline (the 20th of the month). Rates for advertising are shown on page 2.

Roadway Design Engineer (Engineer 3)
(Job# 16-10)

This position can be located in Lake Oswego, Eugene, or Medford.

Summary

The Roadway Design Engineer is responsible for performing engineering tasks related to roadway and site civil design and analysis with limited oversight from senior level staff. The person in this position must either be a licensed professional engineer in the state of primary practice, or be licensed in a different state with the ability to get a license within 6 months of hire. This person is expected to exercise strong engineering judgment, and demonstrate strong roadway engineering fundamentals. The person in this position should show a strong working knowledge of the AASHTO policy on Geometric Design of Highways and Streets and be able to quickly learn and apply other design codes as needed. The person in this position is also expected to work well with others, absorb and apply constructive criticism and seek guidance from more experienced members of the team as necessary. This position requires a willingness to learn skills and perform a variety of tasks not directly related to the field of bridge engineering, including, but not limited to: construction support assignments, drafting, administration, and general civil engineering tasks.

Essential Duties and Responsibilities

- Independently perform complex tasks related to alternatives analysis, roadway design, 3-dimensional modeling, and quantity calculations.
- Independently write technical specifications, reports, and other correspondence to a variety of audiences under the supervision of a senior-level licensed engineer.
- Learn and apply OBEC standards and best practices
- Work collaboratively within multi-disciplinary teams and effectively communicate with others
- Lead the design efforts in the role of engineer-of-record on small design projects
- Perform independent checking of the design work of other team members
- Demonstrate intermediate proficiency with roadway design concepts
- Demonstrate intermediate proficiency with computer aided drafting
- Work efficiently to meet deadlines and perform tasks within a given amount of time
- Demonstrate a strong understanding of project budgets and schedules
- Proficiently employ a variety of design codes related to the industry.
- Perform other related duties as assigned

Requirements/Minimum Qualifications

Education:

This position requires a Bachelor's degree in engineering (civil, structural) from an accredited university and at least four (4) years of experience. A Master's degree focused in civil or structural engineering is preferred and shall substitute for one years' worth of experience.

Certifications:

This position requires a Professional Engineering license in any state, with the ability to get a Professional Engineering license in the state of primary practice within 6 months of hire.

Previous experience/skills:

Required

- Exceptional communication skills and established proficiency working with others
- Intermediate level proficiency with Microsoft Office Suites (Outlook, Word, Excel)
- High level proficiency using AutoCAD and/or MicroStation
- Strong understanding of roadway, stormwater, and/or hydraulics fundamentals including: physics, hydraulics, transportation, and route layout.
- Accurately complete engineering calculations
- Exceptional technical and communication skills
- Strong organization skills
- Working knowledge of AASHTO Roadway Design Standards
- Demonstrate intermediate proficiency with at least one kind of roadway design software like Civil 3D, InRoads, and/or GeoPak

Preferred

- Knowledge and basic proficiency using a second roadway design software like Civil 3D, InRoads, and/or GeoPak
- Working knowledge of stormdrain and water quality treatment design in Oregon and/or Washington
- Working knowledge of open channel hydraulics analysis in Oregon and/or Washington
- Transportation project design experience in Washington (state)

Accountability

- Perform design tasks with little or no guidance and supervision from a senior engineer or project manager
- Follow established procedures and standards; exercise strong judgment with broad guidance and direction from senior staff
- Complete tasks in an accurate, efficient, and organized manner so that they can be easily followed and quickly reviewed by other roadway staff
- Accountable for technical performance on projects, and for successful completion of assigned tasks in the required

(Continued on page 6)

(Continued from page 5)

timeframes and within the allotted budget

Working Conditions and Physical Requirements

This work is typically done within an office environment with occasional field work at project/construction sites. When field assignments are required, the working conditions/physical requirements for field staff apply.

- Normal working hours will be 8 am – 5 pm, but may vary depending on project demands
- Overtime work may be required based on work deadlines
- Extended periods of sitting, standing, and walking around the office; occasional field assignment supporting engineering design functions
- Ability to move, lift, pull, and push 30 - 50 lbs.
- Prolonged physical activity involving standing, walking, bending, reaching, lifting, pulling, and swinging.
- Strong balance and agility to occasionally climb ladders and/or crawl through openings
- Some travel may be required for this position: Working out of area, out of state, or across the state may be required

To apply

Please go to our website (www.obec.com), click on the careers section, and fill out the employment application. This application is required and you will not be considered for this position without submitting the application.

Please also include your cover letter, resume, and any transcripts that may be required for this position.

OBEC Consulting Engineers is committed to being an Affirmative Action/ Equal Opportunity Employer for Minorities, Females, Protected Veterans and Persons with a Disability. Qualified applicants will be considered for employment without regard to protected veteran status and disability status. We do not discriminate in employment on the basis of race, color, religion, sex (including pregnancy and gender identity), national origin, political affiliation, sexual orientation, marital status, disability, genetic information, age, membership in an employee organization, retaliation, parental status, veteran status, disability status, or another other characteristic protected by law.

OBEC CONSULTING ENGINEERS

Roadway Project Engineer (Engineer 4) (Job# 16-11)

This position can be located in Lake Oswego, Eugene, or Medford.

Summary

The Roadway Project Engineer is responsible for independently performing engineering tasks related to roadway and site civil design and analysis. The person in this position must either be a licensed professional engineer in the state of primary practice, or be licensed in a different state with the ability to get a license within 6 months of hire. This person is expected to exercise strong engineering judgment, and demonstrate strong roadway engineering fundamentals. The person in this position should have a strong working knowledge of the AASHTO policy on Geometric Design of Highways and Streets and be able to and apply other design codes as needed. The person in this position is also expected to work well with others, absorb and apply constructive criticism and seek guidance from more experienced members of the team as necessary. This position requires a willingness to learn skills and perform a variety of tasks not directly related to the field of transportation and roadway engineering, including, but not limited to: construction support assignments, drafting, specification writing, administration duties, and general civil engineering tasks.

Essential Duties and Responsibilities

- Independently perform complex tasks related to alternatives analysis, roadway design, 3-dimensional modeling, and quantity calculations for complex transportation projects.
- Independently write technical specifications, reports, and other correspondence to a variety of audiences with little or no supervision.
- Learn and apply OBEC standards and best practices.
- Work collaboratively within multi-disciplinary teams and effectively communicate with others
- Lead the design efforts in the role of engineer-of-record on small to moderate complex projects
- Perform independent checking of the design work of other team members
- Demonstrate intermediate proficiency with roadway design concepts
- Demonstrate intermediate proficiency with computer aided drafting
- Work efficiently to meet deadlines and perform tasks within a given amount of time
- Demonstrate advanced understanding of project budgets and schedules
- Develop familiarity with a variety of design codes related to the industry.
- Successfully manage multiple task assignments simultaneously
- Perform other related duties as assigned

Requirements/Minimum Qualifications

Education:

This position requires a Bachelor's degree in engineering (civil, structural) from an accredited university and at least six (6) years of experience. A Master's degree focused in civil or structural engineering is preferred and shall substitute for one years' worth of experience.

Certifications:

This position requires a Professional Engineering license in any state, with the ability to get a Professional Engineering license in the state of primary practice within 6 months of hire.

Previous experience/skills:

Required

- Exceptional communication skills and established proficiency working with others
- Intermediate to advanced of level proficiency with Microsoft Office Suites (Outlook, Word, Excel)
- Intermediate level CAD proficiency

(Continued on page 7)

(Continued from page 6)

using AutoCAD and/or MicroStation

- Mastery of roadway, stormwater, and/or hydraulics fundamentals including: physics, hydraulics, transportation, and route layout.
- Quickly and accurately complete engineering calculations
- Exceptional technical and communication skills
- Strong organization and time management skills
- Advanced knowledge of AASHTO Roadway Design Standards
- Advanced working skills with at least one kind of roadway design software like Civil 3D, InRoads, and/or GeoPak

Preferred

- Transportation Project experience using a second roadway design software like Civil 3D, InRoads, and/or GeoPak
- Project experience with stormdrain and water quality treatment design in Oregon and/or Washington
- Project experience with open channel hydraulics analysis in Oregon and/or Washington
- Roadway and/or highway project design experience in Washington

Accountability

- Perform design tasks with little or no guidance or supervision from senior-level staff or project manager
- Work as lead engineer on small design projects, and within a team of engineers on projects of moderate to large size
- Follow established procedures and standards; exercise judgment with broad guidance and direction from senior staff
- Complete tasks in an accurate, efficient, and organized manner so that they can be easily followed and quickly reviewed by other roadway staff
- Accountable for technical performance on projects, and for successful completion of assigned tasks in the required timeframes and within the allotted budget

Working Conditions and Physical Requirements

This work is typically done within an office environment with occasional field work at project/construction sites. When field assignments are required, the working conditions/physical requirements for field staff apply.

- Normal working hours will be 8 am – 5 pm, but may vary depending on project demands
- Overtime work may be required based on work deadlines
- Extended periods of sitting, standing, and walking around the office; occasional field assignment supporting engineering design functions
- Ability to move, lift, pull, and push 30 - 50 lbs.
- Prolonged physical activity involving standing, walking, bending, reaching, lifting, pulling, and swinging.
- Strong balance and agility to occasionally climb ladders and/or crawl through openings
- Some travel may be required for this position: Working out of area, out of state, or across the state may be required

To apply

Please go to our website (www.obec.com), click on the careers section, and fill out the employment application. This application is required and you will not be considered for this position without submitting the application.

Please also include your cover letter, resume, and any transcripts that may be required for this position.

OBEC Consulting Engineers is committed to being an Affirmative Action/ Equal Opportunity Employer for Minorities, Females, Protected Veterans and Persons with a Disability. Qualified applicants will be considered for employment without regard to protected veteran status and disability status. We do not discriminate in employment on the basis of race, color, religion, sex (including pregnancy and gender identity), national origin, political affiliation, sexual orientation, marital status, disability, genetic information, age, membership in an employee organization, retaliation, parental status, veteran status, disability status, or another other characteristic protected by law.

CPS HR CONSULTING

pscleanair.org
Puget Sound Clean Air Agency

Air Quality Permit Engineer II

Annual salary range: $68,460 - $91,752 DOQ
Application deadline: Friday, May 20, 2016

The Puget Sound Clean Air Agency (PSCAA) is seeking a self-directed individual with sound engineering judgement. This position performs work that is not only varied and interesting, but is important to maintaining the air quality of the region. This is an opportunity to join a nationally recognized agency with an outstanding reputation. PSCAA engineers are empowered and must think about an issue from many angles. There are generous development opportunities at PSCAA and it is considered a friendly workplace for parents.

Ringed by snow-capped mountain peaks, crisscrossed by fresh and salt waterways, home to urban centers, small cities and vibrant neighborhoods, the Puget Sound region is a commercial center and a major hub for trans-Pacific and European trade. Some of the world's most successful and innovative companies are located here. Outdoor activities are especially plentiful given the area's natural beauty and mild climate. Hiking in the Olympic or Cascade Mountains, kayaking in Lake Union, or cycling on one of many rails-to-trails paths are just a few of the options available.

Candidates may have any combination of education and experience which provides the knowledge, skills and ability to perform the job. For example: Bachelor's degree or Master's degree in engineering or closely related field is required, at least three - five years of experience in air pollu-

(Continued on page 8)

(Continued from page 7)
tion control, preferably in proposing, developing, or implementing air permits.

To be considered for this excellent career opportunity, please submit your resume (including months and years of employment) with cover letter, current salary and six work-related references (including a range of direct reports, peers, and supervisors) to: resumes@cpshr.us

Pam Derby
CPS HR Consulting
Tel: 916 263-1401
Fax: 916 561-7205

To view an online brochure for this position visit: www.cpshr.us/search

Puget Sound Clean Air Agency website: www.pscleanair.org

The Puget Sound Clean Air Agency is an equal opportunity employer.

SCJ Alliance

Transportation Designer, Civil Engineering Designer, and Transportation Project Engineer

SCJ Alliance is hiring for three positions in its Lacey office, including designers for both the transportation and civil engineering groups and a project engineer for the transportation team. SCJ Alliance employs top-quality people who support the company's unique culture of serving not only our clients, but also each other. At SCJ, we are doing significant things! If you are creative, industrious and want a career opportunity that will expand your horizons, SCJ may be for you.

Visit www.scjalliance.com/culture/careers/ to learn more.

Featured Project

Each month, the ASCE Seattle Section newsletter is featuring projects that received the Section's Local Outstanding Civil Engineering Achievement Award in 2015.

2015 ASCE Seattle Section Local Outstanding Civil Engineering Achievement for Structural Projects: South Park Bridge Replacement Project

The $167 million South Park Bascule Bridge Replacement Project constructed a new seismically resilient bridge over Seattle's Duwamish Waterway parallel to and downriver from the existing bridge, which had been battered by earthquakes and age. The project, initiated by King County in 1997, had a long history of challenges. In 2008, HNTB was awarded the final design contract. In 2010, final funding was secured and the bridge was completed and opened to traffic June 30, 2014. Among the numerous project challenges, the following were significant:

The South Park Bridge spans the Duwamish River and emulates many architectural features of the old bridge at the request of the community.

Designing a Movable Span in Seismically Volatile Region

The South Park Bridge is the first bascule bridge designed to meet strict post-seismic operational requirements in an AASHTO Seismic Zone 4 with 70-105 feet deep soft soils. The bridge was designed to be fully functional in the aftermath of an Operational Earthquake Level (108-year return period). Additionally, only moderate and repairable damage was permitted as a result of a Design Earthquake Level (975-year return period). Achieving this objective on a movable span with strict alignment requirements for reliable operation added several degrees of difficulty to the task of design and construction.

Three innovative design features achieve the seismic performance requirements:

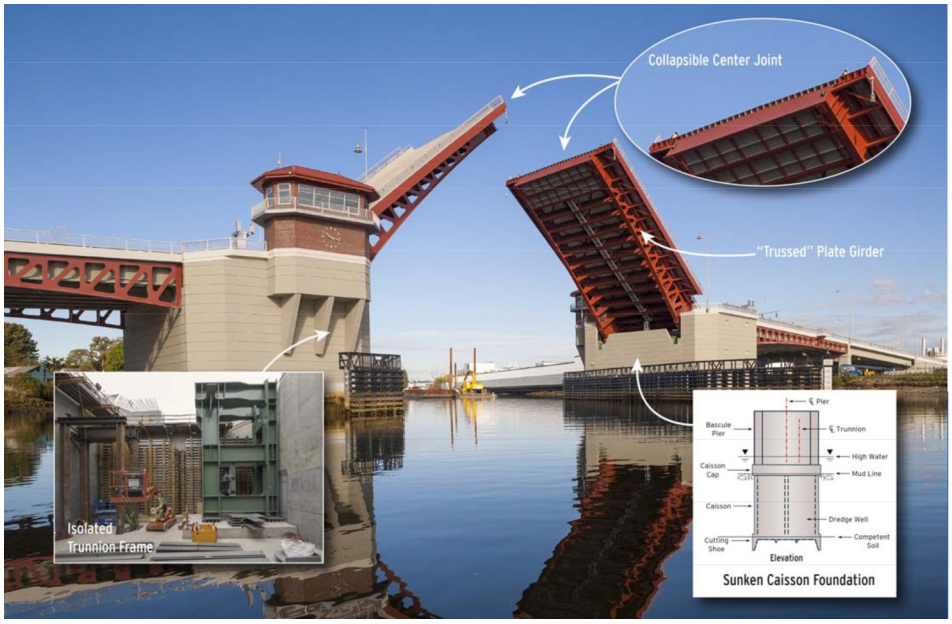
1. **Sunken Caisson Foundations —** Compared to drilled shaft foundations, the sunken caissons provide

(Continued on page 9)

(Continued from page 8)

enhanced stiffness and resilience, reducing seismically induced displacements, such as tilting, and minimize the potential for a permanent set resulting from an earthquake.

2. **Trunnion Frames —** Each bascule leaf is supported on a free-standing steel frame inside each pier that is designed to respond elastically at the higher-level event. The machinery platform also is connected to the same frame. During an earthquake, the machinery and bascule leaf move together as one and relative displacements between components after the earthquake are small, which limits damage to the machinery. In addition, the entire frame can be modestly re-positioned for global span realignment if the foundation experiences any permanent displacement.



Design features to limit seismic damage to bridge for two design events.

3. **Sacrificial Joints —** At mid-span, where two tips of the moveable spans come together, a gap measuring 18 inches just under the deck level avoids contact between the leaves during the higher-level event. This minimizes the transfer of loads to the support frames in each pier and economizes the design of the trunnion frame and bearings. The 18-inch gap is bridged at the deck level with a large finger-type joint cantilevering from the tips of the leaves. These large finger joints are minimally secured to the bridge so that they become sacrificial if the leaves come into contact with one another.

Designing for Enhanced Maintainability and Reliability

Enhanced maintainability of the bridge was accomplished by careful design and detailing, through strategic material selection, and by providing OSHA-compliant access to all areas of the bridge requiring routine inspection and maintenance without having to disrupt traffic.

The main girders, one of the most prominent and unique elements of the bridge, are believed to be the first known usage of a "trussed" web girder. They were designed to emulate the historic character of the existing riveted truss bridge while leveraging the economy and efficiency of a modern welded plate girder system. This continuous welded plate construction eliminates gusset plates and thousands of fasteners and will greatly improve future inspection, bridge maintenance and safety compared to gusset-plated joints on typical truss bridges that are chronic problem areas.

Inspector safety is improved and the paint system is protected from damaging guano due to the extra design effort to include more than 5 lineal miles of bird control to popular roosting areas on this "pigeon popular" bridge. This bird control was painted the same color as the surrounding structure and is virtually invisible.

Keeping the Community Involved During Project Impacts

Throughout the development, design and construction of the project, King County maintained frequent and open multilingual communication with the businesses and residents around the bridge to solicit design input and keep them apprised of the status of the project. The plan all along had been to keep traffic on the original bridge while the new bridge was constructed on a parallel alignment. But due to the rapidly deteriorating condition of the original bridge, the bridge had to be closed prior to breaking ground on its

(Continued on page 10)

(Continued from page 9)

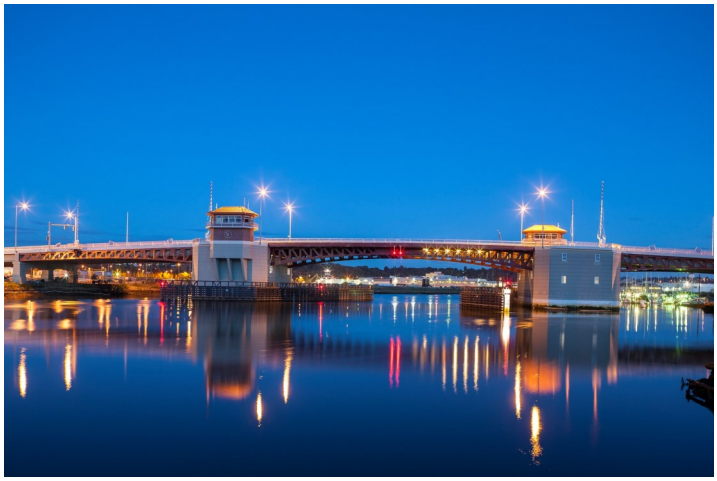
replacement.

As could be predicted, the community reacted negatively to the news and public outreach was increased even more with a series of electronic updates and regular public meetings until full funding was secured several months later. Door-to-door visits to key businesses along the closed corridor proved to be a most effective means of communicating and answering questions in this diverse community. When the language barrier became too great, translators were extremely effective in communicating with minorities. Once they heard their native language, minorities opened up and the conversation flowed easily. Extensive outreach continued during construction and the addition of quarterly photo journalism meetings at a local restaurant proved to be quite popular. These were especially valuable during periods of caisson and foundation construction when construction progress was not apparent from a "sidewalk superintendent's" point of view.

Preserving the Historic Features of the Original Bridge

Because the original bridge was one of few working examples of an original Scherzer Rolling Lift bridge, there was significant public agency and community interest in preserving the character and significance of the original bridge in the new bridge design. The original bridge was listed on the National Register of Historic Places and was officially designated a historic landmark by the King County Landmarks Commission.

The new bridge was designed to emulate the overall look and feel of the old bridge by incorporating truss-like features without enduring the disadvantages of a traditional truss design. The fascia girders on the approach spans and the octagonal brick control towers were selected in honor of the original structure. Key operational and architectural elements of the original bridge were salvaged, restored and incorporated in the new bridge and the surrounding site. Gears from the operating machinery and panels from the bascule rail were artistically incorporated in the sidewalk railing. The historical elements of the rolling lift bridge, the rockers and guide tracks, were transformed into gateway monuments at each end of the bridge and decorative light posts, cast concrete railing, old bricks, latticed beams and deck grating were used to embellish the site around the bridge. Once the bridge opened, the public was very satisfied with the outcome, largely because their input was acknowledged and added to the design.



The South Park Bridge is staffed 24 hours a day.

Designing and Building an Environmentally Responsible Project

In an effort to design a project with a measurable degree of sustainability, the project team conducted "green" charrettes, or workshops, to brainstorm ideas for resource efficiency and low-impact development that would represent a positive contribution to the built environment. Key components that came out of these efforts were:

- The re-purposing of more than 100 elements from the original bridge into the new bridge,
- The inclusion of more than 50,000 board feet of recycled plastic plank into the protection pier design along the waterway,
- The regarding and restoration of both shorelines to create badly needed intertidal habitat for an endangered salmon species, and
- The addition of a decorative rain garden that collects and naturally treats stormwater runoff from the bridge prior to discharging it into the waterway, eliminating the need for a huge underground detention vault. Interpretive signs within this park-like area illustrate topics of local interest, including the rain garden.

Summary

The project goal was to design a movable bridge that would be open to traffic immediately after a minor

(Continued on page 11)

(Continued from page 10)

earthquake and be closed to traffic for a very limited time for repairs after a major earthquake. HNTB achieved this goal by developing innovative ideas, such as the sunken caisson foundations, isolated trunnion frames and collapsible center joints on the lift spans. These ideas not only proved to be economical but enhanced seismic performance relative to a group of drilled shafts.

The project incorporated features to preserve the environment, acknowledge the original historical bridge, and meet the inspection and maintenance needs of the bridge owner. Equally important the project recognized and added project elements that stemmed from public input during the extensive outreach efforts.

The new South Park Bridge is more than a bridge. It reconnects communities and businesses on both sides of the river, improves freight mobility and provides better regional access to downtown Seattle and the adjacent industrial area. The bridge has restored a reliable link to the South Park community. The community can take pride in a landmark draw bridge that is safe, preserves the art and historical features of the old bridge and improves the marine and land-based environment of the surrounding areas.

ASCE Seattle Section Executive Board Minutes for March 14, 2016 Skype Meeting

Attendees:

Amanda Schweickert
Courtney Davis
Evan Sheesley
Gene Gladden
Lisa Harbert
Stefanie Herzstein
Tony Nguyen

Meeting called to order at 12:05 pm by Evan. MOTION to approve agenda (as amended by addition of Centennial Banner topic) by Amanda and seconded by Stef. Passed unanimously.

MOTION to approve February meeting minutes by Amanda and seconded by Stef. Passed unanimously.

Old Business

- Nomination Committee & Board Nominations — Stef
  - Include upcoming announcements in next newsletter
  - Open nominations at April meeting
    - Treasurer
      - Shailee Sztern
    - President-elect
      - Diana Hasegan (YMF Scholarship Chair)
    - Technical Director-No nominee
      - Javier Homero Flores (WRE Chair)-potential
      - Diane Giraldo (Diversity Chair)-potential
  - ACTION ITEM: Nomination committee will be looking for Technical Director nominee(s).

- Connecting with Washington Sections — Evan
  - ACTION ITEM: Initial conference call meeting with all Section/Branch Leaders on March 22nd. Let Evan know if you will be participating.

New Business

Treasurer's Report and Action Items — Gene

- Tracking Well
- ACTION ITEM: Change to dinner policy: HH will fill out receipt and drop into Wells Fargo after each dinner. Don will email receipt to Gene and Tony.
- Rebuilding Together got a return letter.
  - ACTION ITEM: Need an updated address. Amanda will coordinate with Jessica to get an updated address.
- Kitsap Branch
  - ACTION ITEM: Gene needs to send a check for $500.
- Report
  - Motion to approve Treasurer's Report by Courtney seconded by Stef. Passed unanimously.

Membership Chair Update — Kelli

- Boeing members have been dropped from the Section.
  - Should we still have budget for them?

(Continued on page 12)

(Continued from page 11)

Standing Committee Report and Action Items — A. Schweickert

- Paper Competition
  - ACTION ITEM: Coordinate on the May meeting. Prizes? Have a keynote speaker or will each group present? Amy needs to coordinate checks with Gene.
- Lifeline/Audit
  - Jaime Saez
  - Cory Luker
- Board Rep
  - Amy Thatcher
- RH Thompson
  - Website has been updated with correct application
  - ACTION ITEM: Make an announcement at next meeting.

Branch Report and Action Items — A. Shellenberger-NOT PRESENT

- Not Present

Technical Committee Report Action Items — Lisa

- No Action Item and Report attached.

YMF Report and Action Items — Courtney

- Rebuilding Together: Next month.
- Executive forum: End of April-Engineering on a global scale. Army Corp/Turner/Parsons Brinkerhoff.
- Courtney will be relocating at beginning of April. Still same company and e-mail contact. Will still be able to remote in to Board Meetings and will be involved in YMF Seattle Section Awards Nominations for next year.

Other New Business

- ASCE President Endorsement — Evan
  - Kristina Swallow
    - Discussion
      - Courtney discussed that WRYMC did endorse and Seattle YMF will be looking to discuss endorsement at next YMF Board Meeting.
      - Stef endorses her (known her for 12 years). Very active. Great Leader. Great president for ASCE.
    - Endorsement for 2016-2017 President Elect
      - Stef motions to endorse Kristina Swallow and Courtney seconds. Passed unanimously.
        - ACTION ITEM: Place in newsletter
- Centennial Banner — Evan
  - Need new housing location for them. 5ftx3ftx.5ft.
    - ACTION ITEM: Courtney says YMF has storage unit that can be used. Courtney to confirm if there is space to move Centennial Banner there.
  - Gene brought up that we should get a new container for the banners as they are expensive banners and should be well kept.
  - We should used the banners at meetings for special occasions (such as officer nominations).

Miscellaneous

Next Board Meeting will be April 11th.
Next Membership Meeting will be on April 13th.
Meeting called to a close at 12:56pm.
Attached are Board Member Reports.

MEMBERSHIP REPORT — Kelli Dean

- **New Members**
  - Based on the new membership information from the ASCE national database, downloaded on March 4, 2016: 37 new members have enrolled with the Seattle Section since February 1, 2016. 31 members are new student members and 6 are associate or affiliate members.
- **Membership**
  - As of March 4 , 2016, the Seattle Section and Branches have 2,559 members (Seattle 2,267, Boeing 0, North branch 140, Kitsap 152); the significant changes are the removal of all Boeing branch members from the database. There are 54 more members than the same time a year ago. There are 790 YMF members at this time an increase over last month of 41.
    - The membership database received from ASCE headquarters was found to have 0 duplicates this month.

STANDING COMMITTEE REPORTS — Amanda Schweickert

- **Audit Committee** – Jaime Saez
  - No update
- **ASCE/SEAW Lifeline & Earthquake Engineering Committee** – VACANT
  - VACANT, Kelli following up on possible chair
- **Legislative Committee** – Shane Binder
  - No update
- **Diversity Committee** – Diana Giraldo/Jacyln Hayden
  - No update

(Continued on page 13)

(Continued from page 12)

- **History and Heritage –** Cindy Hirsch
  - No update
- **House and Hospitality –** Don Nguyen/Katie Sultan -Wright
  - No update
- **Order of the Engineer –** Amy Riley
  - Planning on an Order of the Engineer ceremony in May.
- **Professional Practice –** Ed Huston
  - Ed has been working with the Chair of SEAW Seattle Chapter Professional Practice Committee and Younes to take the original theme of the 2016 joint meeting and moving it to March 2017 which would be a joint meeting with SEAW Seattle Chapter. Ed has been in contact with the new Executive Director of the Washington Board of Registration for the meeting in March 2017.
- **Program Chair –** Younes Nouri
  - No Update
- **RH Thomson Scholarship –** Emily Spahn/Casey Nelson/Lorelei Williams
  - Casey has requested edits to the webpage and has sent this request to Eric Knigge.
- **Public Information –** Rachel Blomker PRR Biz will decide
  - Amanda will contact PRR Biz to find out who the new representative will be for ASCE.
- **PSEC –** Paul Grant
  - The Museum of Flight is offering FREE memberships for ALL kids ages 5-18. It is a new program they are running called Connections. It offers free, unlimited visits to the Museum for the student AND one adult. All they have to do is fill out the form to enroll in the program (there's no cost for this either- It's totally free). Here's the online form: https://www.museumofflight.org/education/connections
  - Planned Activities
    - Engineering Mentor Nights
      - Highline College – April 19
- **University Advisory Committee –** Amy Riley
  - Amy has been in discussion with the board clarifying the details of the paper competition. She has been in contact with SU and UW about the competition. Both schools will be participating.
- **Washington State Board of Registration Representative –** VACANT
  - VACANT, Kelli following up on possible chair
- **EWB-USA Puget Sound Professionals (PSP) Chapter –** Eset Alemu
  - No update
- **Community Service –** Kristina Lowthian
  - No update
- **K-12 Outreach –** Eset Alemu and Vacant
  - No update

BRANCH REPORT — Amanda Shellenberger

- **North Branch** (by Melissa Gehrmann)
  - The North Branch has developed a tentative meeting schedule for 2016.
    - March 16: Mt. Vernon
      - Speaker: Wayne Wright, PWS, CFP-GeoEngineers
        - Fish considerations to culvert replacement
    - May 18: Bellingham
      - Speaker: Doug Ranney-Whatcom County
        - Seismic Retrofit of 1929 Bridge
    - July 20: Mt. Vernon
      - Speaker: TBD
    - September 21: Bellingham
      - Chris Damitio, PE and Shane Spahr, PE-WSDOT
        - Anderson Creek Bridge (SR542)
    - November 16: Mt. Vernon
      - TBD
- **Kitsap Branch** (by David Dinkuhn and Shylo Shorthouse)
  - The Kitsap Branch is planning on having an ASCE booth at the West Sound STEM Showcase on Saturday, April 30th from 10am-3pm, at the Kitsap Mall in Silverdale. We are looking for people to sign up and man our table as well as brainstorming ideas for an interactive piece. The Showcase is for grades K-12. We hope to focus on high school students and letting them be aware of the job opportunities in the engineering fields. We also hope that other engineers will see our involvement and possibly become engaged and attend our monthly meetings.
    - ACTION ITEM: Follow up on 1/28 budget request from David Dinkuhn
- **Boeing Branch**
  - ACTION ITEM: Amanda Shellenberger to work on trying to get into contact with Boeing ASCE representatives.

(Continued on page 14)

(Continued from page 13)

TECHNICAL COMMITTEES REPORT — Lisa Harbert

- **Structural**
  - We are looking forward to our Joint meeting on 3/24 and the AISC T. R. Higgins lecture "What Seismic Steel Design is all about"
  - We are also looking forward to our April meeting (I plan to announce this in the March or April Seattle Section newsletter) on the raising of the historic NY Bayonne Bridge.
  - Our management company representation continues to evolve. After Lynnell Brunswig retired (after 30 years) we engaged the services of MCA which we learned this month has been bought out by SBI
  - Our Structural Refresher course is in full swing.
  - Our December Nepal Earthquake Briefing will be presented in Spokane and Tri-Cities later this week.
- **Sustainability Committee**
  - Nominated Britta Moore as technical liaison for the committee. She is helping coordinate technical tours and other activities. We have a larger description of her duties if needed.
  - January 20 – Participated in ASCE Sustainability Committee meeting to discuss events and outreach.
  - General – Networked and coordinated agency outreach to explain Envision to stakeholders and potential projects.
  - February 4 - Bruce Erickson and Amanda Schweickert gave a presentation to Sound Transit explaining Envision rating system. There were 30 attendees.
  - Bullitt Technical tour tentatively scheduled for March 30.
  - Coordinating Green Apple Day for Thurgood Marshall High school.
- **Water Resources Committee**
  - Monthly meeting will be in Bellevue at lunch time talk about the management of the Baker Hydroelectric project during last year's drought, meeting economic and ecological requirements. You can always go our webpage for further updates and notices. Check out its new mobile-friendly format: http://www.seattleasce.org/committees/water_resource.php
- **Geotechnical Group**
  - We had about 78 people attend our joint meeting with general section on January 28th with Dr. Scott Miles presenting on Local and State Level Seismic Resilience Planning in Washington, Oregon, and California.
  - ASCE Seattle Section Geotechnical Group's next meeting will be the Geo-Institute Cross-USA Lecture and UW Hennes Lecture on March 1st at Alder Hall, University of Washington.
    - Dr. Jean-Louis Briaud, Texas A&M University will present on Observational Method for Bridge Scour
  - Our Spring Short Course presenter is Jerry A. DiMaggio. His topic is "Design, Construction and Monitoring of Driven Pile Foundations" on April 1, 2016 at the Red Lion Hotel, Bellevue.
  - Our Spring Seminar "Innovations in Deep Foundations" will be held on April 2, 2016 at Kane Hall, University of Washington. We have many prominent speakers including: Jerry DiMaggio, John Turner , Armin Stuedlein, Tom Armour, Brice Exley and Steve Spencer, Erik Loehr, Anna Sellountou, and Hisham Sarieddine.
  - More details and links to register for any of these events, please visit our website: http://www.seattlegeotech.org/

YMF BOARD REPORT — Courtney Davis

- **Past Events**
  - January 3 – March 13 – ASCE Soccer Team – Winter Season [9 YMs]
    - Games are on Wednesday evenings at various fields around Seattle. All experience levels are welcome to join.
  - February 6 – PSEC Engineering Fair at the Museum of Flight [12 Volunteers Total, 6 YMs, 250 students]
    - The PSEC Engineering Fair at the Museum of Flight was held from 10AM to 4PM.
    - We had about 12 volunteers; 6 from YMF and the rest from ASCE Seattle Section and SEAW. The volunteers talked to the kids about structural engineering and considerations for design for earthquakes. It was a very popular table and about 250 kids stopped by.
  - February 6 – Popsicle Stick Bridge Competition 2015 [40 volunteers, 17 schools, 51 teams]
    - The 21st Annual Popsicle Stick Bridge Competition was held on Saturday, February 6th, 2016 at the Museum of Flight. This year we had 17 schools (including high schools and middle schools) participate, bringing with them 51 teams in total! We had over 40 volunteers help us out with registration, technical judging, aesthetic judging, emceeing, and guiding. We also

(Continued on page 15)

(Continued from page 14)

had a presentation from WJE to entertain the guests.
    - We had two corporate teams enter this year from our pool of sponsors: AECOM and COWI. AECOM took the coveted corporate trophy for the 2nd year in a row! Overall, it was another successful run of the competition.
  - February 8 – Eastside Networking Event at Scotty Browns
    - The highlight of the menu were the nachos. Younger members gathered to network and share a drink after work.
  - February 4&18 – Lake Stevens High School ASCE Civil Engineering Club Meeting [10 Students]
    - Lake Stevens High School students gathered to discuss the Popsicle Stick Bridge during one of the sessions
    - During the second sessions the students did an activity creating water filters and seeing how clean the water was coming out. They were very successful!
  - February 18 – UW YMF Young Professionals Panel [6 YMs]
    - A panel of younger members went to the University of Washington to discuss their experience as a working professional post college and answer questions for the students about working in the real world.
  - February 20 – Community Service Event – Adopt-a-Road
    - The YMF met at the Myers/Olson Park and Ride at 9000 Olson Pl SW behind Arrowhead Gardens and Public Storage Team up with the ASCE Seattle Section to clean up our Adopt-A-Road section in South Seattle. We have adopted two miles of Myers Way S/1st Ave S. King The County provided all of the material needed for the cleanup.
  - February 22 – Seattle Networking at Tutta Bellas [6 YMs]
    - Tutta Bella Neapolitan Pizzeria in Westlake was the gathering place for February's Seattle networking event. Although we had a low turnout, younger members had fun socializing and trying almost every type of pizza on the happy hour menu! Startup of the coordination and planning for the upcoming Executive Panel event was also discussed.
- **Upcoming Events**
  - March 3 – Lake Stevens High School ASCE Civil Engineering Club Meeting
  - March 4-6 – Annual YMF Ski Retreat in Leavenworth (joint with North Branch and Portland)
  - March 8 – Executive Panel Conference Call
  - March 12 – Community Service Event Habitat for Humanity
  - March 14 – Eastside Networking at Parlor
  - March 17 – Lake Stevens High School ASCE Civil Engineering Club Meeting
  - March 28 – Tour at Pike Place MarketFront Project and Joing Seattle Happy Hour @ Alibi Room
  - March 31 – Lake Stevens High School ASCE Civil Engineering Club Meeting
  - April 14 – Lake Stevens High School ASCE Civil Engineering Club Meeting
  - April 28 – Lake Stevens High School ASCE Civil Engineering Club Meeting
  - April 30th – Rebuilding Together with Section
  - May 12 – Lake Stevens High School ASCE Civil Engineering Club Meeting
- **Committee Activities**
  - On-going soccer league

New Members

The following members have enrolled with the Seattle Section between April 1 and April 25, 2016.

Vamshi Ramadugu	Brad Treece	Kyle Korbines	Brandon Lester
Andres Rondon	Jeffrey Stokke	Ethan Jensen	
Daniel Stewart	Yu-Ting Liu	Alexandra Golitz	

Event: 9th Annual Cultural Resource Protection Summit — "Communication Across Careers and Cultures" — May 25–26, 2016

9th Annual Cultural Resource Protection Summit. "Communication Across Careers and Cultures." May 25-26, 2016. Suquamish Tribe's House of Awakened Culture. Event website is www.theleadershipseries.info/summithome.html. Please contact Mary Rossi at mkrossi@eppardvision.org with any questions. Registration is open and Sponsorships are available!

The 2016 Cultural Resource Protection Summit marks the ninth anniversary of our gathering. Since its inception, the primary goal in organizing the annual Summit has been to facilitate amongst all affected parties an open, frank discussion about the intersection between cultural resources and land use. The Summit is designed to promote collaborative cultural resource planning as an effective means of finding resolution to issues before they escalate into emotionally charged, divisive, and expensive stalemates or lawsuits.

This year, the Summit agenda will encourage attendees to examine the challenges of communication across careers (professions) and cultures (value systems), as well as real-world examples of how effective communication supports responsible land use planning. On Day 1, we will focus on issues of particular interest to land use planners and developers, while on Day 2, we will address more advanced Cultural Resource Management (CRM) topics. Both days will include a keynote speaker and a series of related panel sessions culminating in small and large-group Q&A/ discussion. So, bring an open, inquisitive mind and your burning questions about how to communicate cultural resource concerns to others!

Join us at the Suquamish Tribe's beautiful and inviting House of Awakened Culture for a two-day gathering that will help you improve your technical skills while deepening your connection to why we do this work. Leave with more tools for protecting cultural resources and sharing the important stories they tell.

DAY #1 KEYNOTE BY COLL THRUSH, UBC Professor and Author: Coll Thrush is a Professor of History at the University of British Columbia and author of Native Seattle: Histories from the Crossing-Over Place, winner of a 2007 Washington State Book Award. His research interests include the intersections between indigenous and other histories, including urban, environmental, imperial, and science; place and belonging; and the Northwest Coast of North America. He is currently writing Indigenous London: Native Travellers at the Heart of Empire.

DAY #2 KEYNOTE BY CHRISTOPHER HORSETHIEF, Consultant: Christopher Horsethief is a research professor and consultant. His research interests include the group dynamics of collectively traumatized communities and the linkages between indigenous language and culture. He has created tech apps, including Native language keyboards, and helps speech communities create self-determined methods of language revitalization.