GROUNDBREAKING

2022 OSBEELS Symposium
September 29-30
Attendee Notebook

bit.ly/OSBEELS2022

OSBEELS 2022 Symposium
September 29-30 / 8:00 a.m. – 4:00 p.m.

GROUNDBREAKING

Attendee Notebook

Section Links

Important Information & Tips

- Sign into the Zoom account you registered under *before* following the link to the Sympoisum.
- After registering, you should have received a confirmation email from Zoom on behalf of the OSBEELS. Follow the link within your confirmation email to join the virtual conference this week.
- Internet connection: power down any devices not in use, close any applications or browser windows not in use, make sure your device is plugged in for best audio and video quality.
- Visit https://zoom.us/test to test out your set up to ensure no network or technical issues exist.
- During the Symposium, the fastest way to contact us is to **text** Nick @ 971-701-1844 or Jenn @ 503-551-0323

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Event Summary and Expectations

After months of preparation and planning, the 2022 Symposium is here! This notebook was developed to provide you with all the necessary information and tips in one place as you prepare to join us for the 2-day virtual event. Within this digital notebook you'll find:

- Basic event details
- Daily schedule
- Best practices for attending a virtual event
- Tutorials on the Zoom webinar platform

Breakdown of participants at the 2022 OSBEELS Symposium:

Host: OSBEELS, we will coordinate beginning and end of day periods, as well as transitions between presenters

Attendee: YOU, Registered individuals who will be tuning into the event

- As an attendee, you will only be able to tune into the virtual conference and not be able to share video or audio.
- Attendees are able to post questions and participate in polls during the conference and presentations.

Presenter/Panelist:

- When presenting, "speakers/panelists" will have the ability to share their audio and video with attendees.

If at any point during the conference you are experiencing technical difficulties or have questions please reach out to the OSBEELS event staff who will be available throughout the day.

Details regarding the structure of the live, virtual presentation:

- Presenters have 60 minutes to present and answer questions.
- As attendees, you will only be able to tune-into the broadcast. You will not have audio or video capabilities unless granted by the OSBEELS event hosts.
- Attendees will be able to chat and pose questions for the Q&A session, as well as "up-vote" favorited questions.
- OSBEELS event staff will monitor audience questions and pull the top 2-3 to share at the end with presenters during the Q&A session.
- OSBEELS event staff will be monitoring the chat log throughout the day and responding to any questions as soon as possible.

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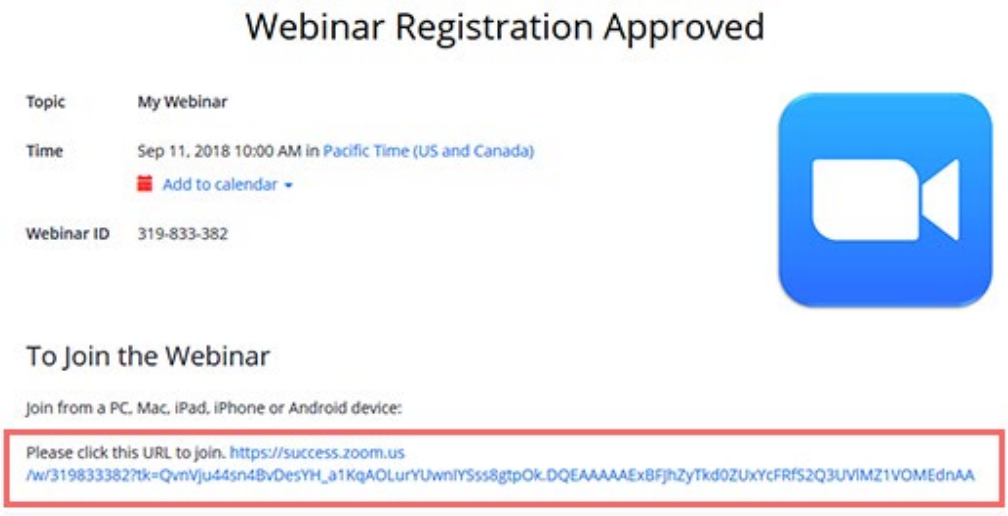
Best Practices

- When using equipment or working from a location not regularly used, test your internet and webinar connections in advance. If possible, establish video and audio connections prior to your virtual session to test quality.
- Visit https://zoom.us/test to test out your set up to ensure no network or technical issues exist.
- If connecting from a laptop, plug in the power cord. Battery use can adversely affect video quality.
- If you and other colleagues are tuning into the event through one feed, make sure all individuals who are participating are registered in order for us to accurately track their attendance and to assist with providing PDH certificates following the event.
- It is also best to inform the OSBEELS event staff ahead of the event if you and other registered attendees are watching from one feed so we may mark all who are viewing the virtual conference are marked as in attendance.

Many individuals may have previously participated on a teleconferencing meeting on the Zoom platform, and for some this may be their first time. We'd like to note there are small differences between the Zoom Meeting and the Zoom Webinar platforms. If interested we encourage attendees to visit the Zoom blog and learn about the experience they can expect as an "attendee" on the Zoom Webinar platform. Learn more here: https://support.zoom.us/hc/en-us/articles/115004954946



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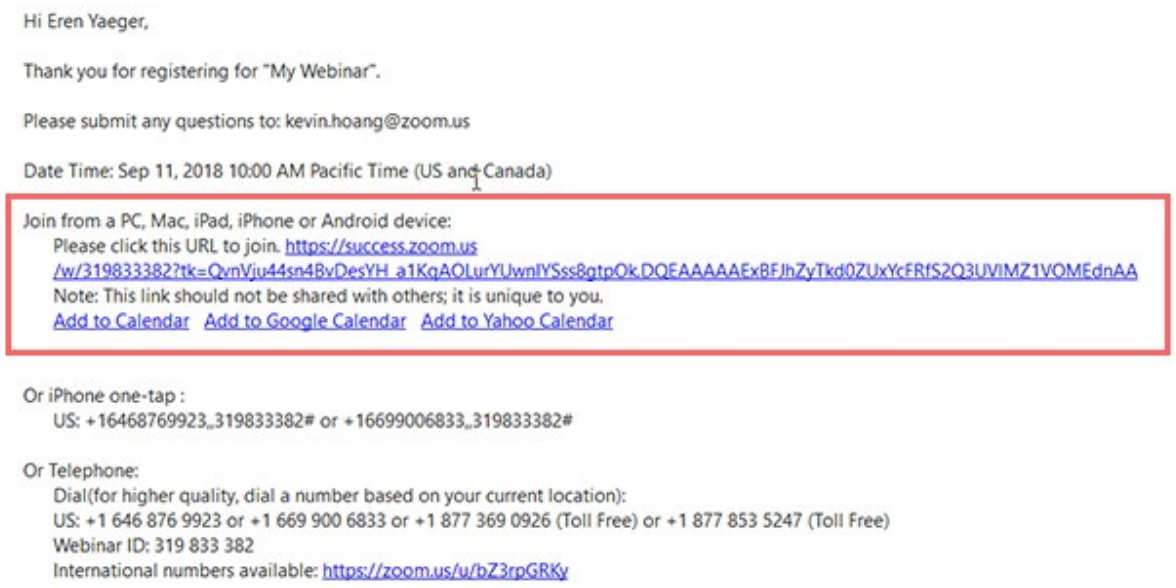
Webinar Interface

When using the link provided by your OSBEELS host via email,
you will be directly added into the webinar.



Hi Eren Yaeger,

Thank you for registering for "My Webinar".

Please submit any questions to: kevin.hoang@zoom.us

Date Time: Sep 11, 2018 10:00 AM Pacific Time (US and Canada)

Join from a PC, Mac, iPad, iPhone or Android device:
Please click this URL to join. https://success.zoom.us
/w/319833382?tk=QvnVju44sn4BvDesYH_a1KqAOLurYUwnIYSss8gtpOk.DQEAAAAAExBFJhZyTkd0ZUxYcFRfS2Q3UVlMZ1VOMEdnAA
Note: This link should not be shared with others; it is unique to you.
Add to Calendar Add to Google Calendar Add to Yahoo Calendar

Or iPhone one-tap :
US: +16468769923,,319833382# or +16699006833,,319833382#

Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 646 876 9923 or +1 669 900 6833 or +1 877 369 0926 (Toll Free) or +1 877 853 5247 (Toll Free)
Webinar ID: 319 833 382
International numbers available: https://zoom.us/u/bZ3rpGRKy

Or manually join:

1. Sign in to the Zoom Desktop Client or Mobile App.
2. Click or tap Join a Meeting.
3. Enter the 9-digit webinar ID, and click Join or tap Join Meeting.
4. If prompted, enter your name and email address, then click Join Webinar or tap Join.

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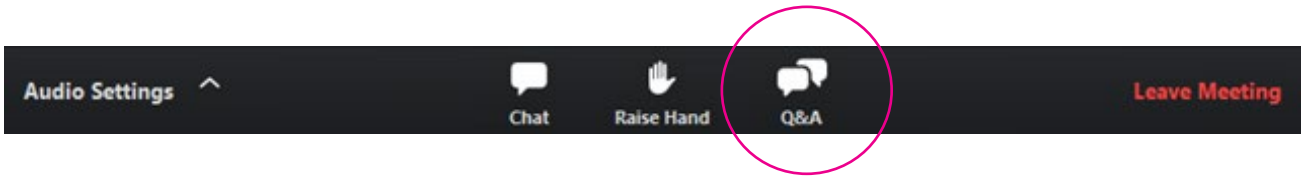
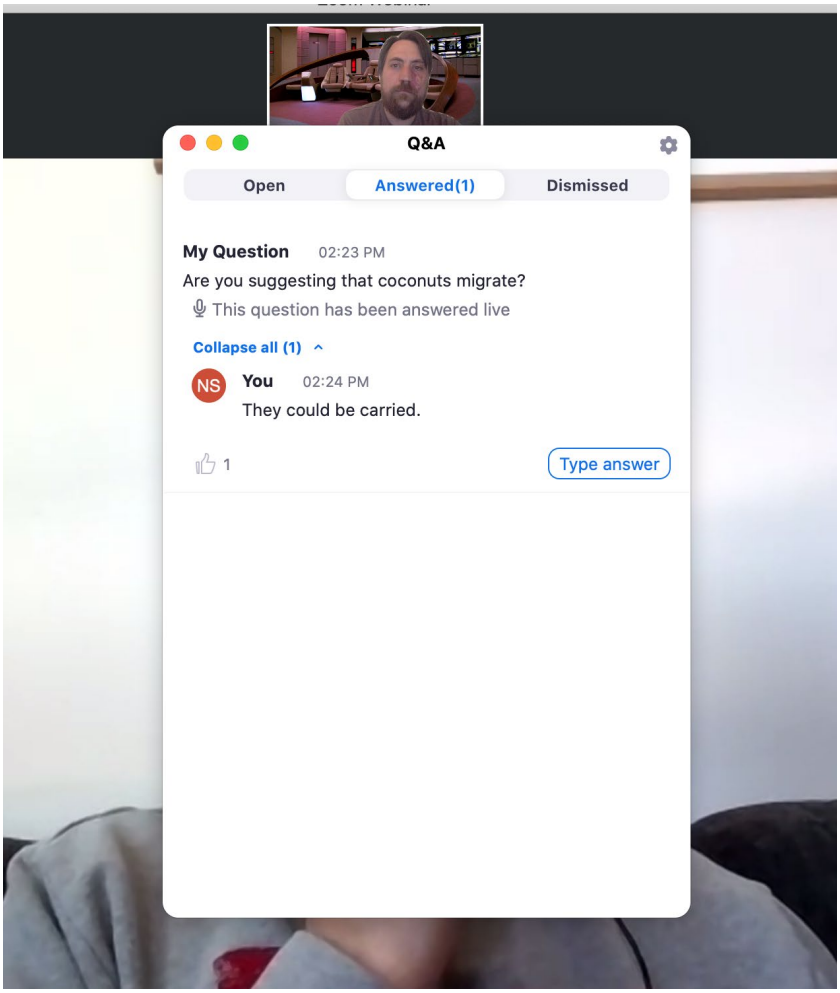
Webinar Interface

Submit your questions with the Q&A option at the bottom.





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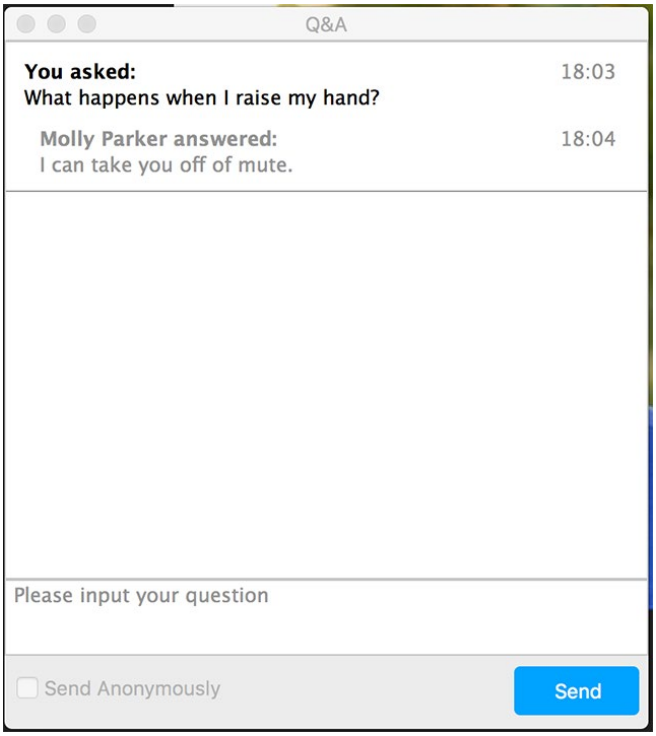
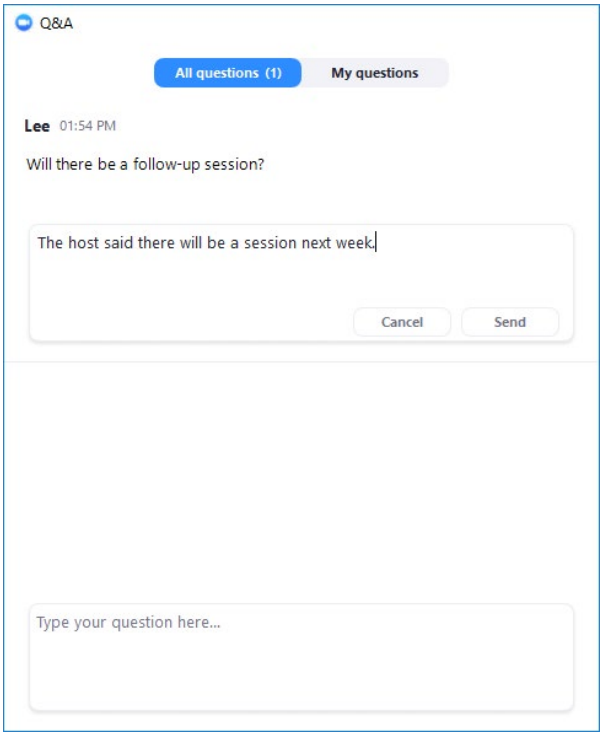
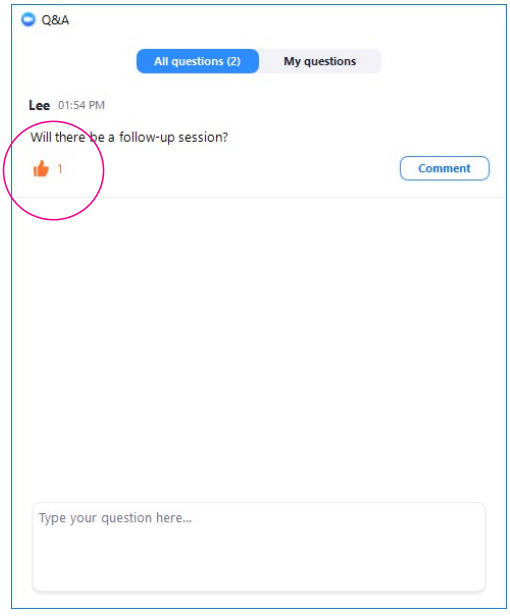
Webinar Interface

Ask questions
"Like" questions, comments, or answers







GROUNDBREAKING / SCHEDULE

Thursday, Sept. 29	Time	Friday, Sept. 30
8:00 – 8:15 a.m. Welcome & Intros		
Achieving Seismic Resilience for the Oregon State Treasury's New Headquarters Reid Zimmerman, PE, SE KPFF Consulting	8:15 – 9:15 a.m. Session 1	*Engineers of Destruction - The Reser Stadium Demolition Story* Eric McKune, PE Smith Monroe & Gray Engineers and Paul Rose, PE
Wheatridge Renewable Energy Facility Scott Mara, PE, PMP Portland General Electric	9:30 – 10:30 a.m. Session 2	*Stuck Between a Lake and a Hard Place, The Lake and Everett Roundabout* James Carothers, PE City of Camas, Greg Jellison, PE PBS Engineering and Environmental, and Cory Kratovil, PE PBS Engineering and Environmental
Hydro Surveying Our Waters Blair Carlson, PE, CH AKS Engineering & Surveying	10:45 a.m. – 11:45 a.m. Session 3	*Surveying Trends Shaping Education* Michael Olsen Oregon State University - Geomatics, Surveying and Geomatics Educators Society
11:45 a.m. – 12:00 p.m. Spotlight Session		
12:00 – 12:30 p.m. Lunch Break		
Oregon State University's Mass Timber Forest Science Complex Omer Mohammed, PEng, PE Equilibrium Consulting Inc.	12:30 – 1:30 p.m. Session 4	*OSBEELS Application Process Updates* OSBEELS
Closing Corners in Wonderland Royce Hill, PLS US Bureau of Land Management	1:30 – 2:30 p.m. Session 5	*Restoring the Oneonta Tunnel* George Freitag, CEG GRI, Molly Davis, PE David Evans and Associates, and Thomas Braibish, PE ODOT
2:30 – 2:45 p.m. Spotlight Session		
Solving Wildfire Mysteries David Blunck Blunch Research Group	2:45 – 3:45 p.m. Session 6	*Improving Fish Passage During Turbine Replacement on the Snake and Columbia River* Jon Renholds, PE, Brittany Heffernan, PE, and Jack McCollister, PE U.S. Army Corps of Engineers
3:45 – 4:00 p.m. Closing Remarks		

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Presentations

Achieving Seismic Resilience for the Oregon State Treasury's New Headquarters

Reid Zimmerman, PE, SE KPFF Consulting

Oregon State Treasury processes more than $300 billion annually on behalf of state agencies and local governments and oversees and manages $100 billion in investments. In addition to this essential day-to-day work, Oregon State Treasury is responsible for distributing Federal Emergency Management Agency (FEMA) funds following a disaster such as a Cascadia Subduction Zone earthquake. Oregon State Treasury's new headquarters is a 35,000sf, 2-story, steel-framed building located in Salem, Oregon. Seismic base isolation of the building dramatically reduces drift and acceleration demands on the superstructure and nonstructural components. The building achieves the highest Platinum seismic rating from the U.S. Resiliency Council and is the first Platinum-rated building in Oregon and the first USRC-rated seismically isolated building in the United States.

Wheatridge Renewable Energy Facility

Scott Mara, PE, PMP Portland General Electric

Summary coming soon

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Presentations

Hydro Surveying Our Waters

Blair Carlson, PE, CH and Jason Magalen, PE AKS Engineering & Surveying

Hydrographic surveying is a commonly overlooked critical component of many private and publics works projects on and around our many waterways. Since 2014, AKS has worked with local ports, private terminal operators, marinas, cities, utilities providers, state and federal agencies, and contractors to provide condition assessments, oversee dredging and construction efforts, and facilitate modeling studies for a number of purposes. Put simply, hydrographic surveying is basically performing a open-ended traverse over water. We engage the latest RTK GPS technology paired with highly accurate sonar systems and other equipment to depict elevations, general conditions, and vegetation underwater. AKS owns and operates a variety of survey vessels ranging from 27' offshore fully outfitted multi-beam vessels to small single-beam remote vessels used in inaccessible ponds and reservoirs. The technology and equipment utilized on each project is specifically identified based on client needs and site conditions. One recent project AKS completed includes a high-resolution condition survey for the City of Portland's Water Bureau that is currently being used for sedimentation studies and reservoir capacity calculations. We have also provided a number of hydrographic surveys at the Port of Camas-Washougal over the years to support their permitting and maintenance dredging efforts. AKS recently completed a high-resolution survey of the Port of Coos Bay's marina and shipyard facilities to support planning efforts for their next dredging episode. AKS has provided this service to the Port nearly annually since 2014. In this presentation, we will briefly introduce the many uses for hydrographic surveys to support a range of projects, provide a high level overview of the typical means and methods for obtaining accurate survey data, and discuss several interesting project examples.

Oregon State University's Mass Timber Forest Science Complex

Omer Mohammed, PEng, PE Equilibrium Consulting Inc.

The College of Forestry at the Oregon State University provides a new learning environment for the Forest Sciences Complex in Corvallis, OR, with two new mass timber buildings, the 80,000 sft Peavy Hall and the 20,000 sft Emmerson Advanced Wood Products Laboratory (AWP). Peavy Hall provides classrooms, research laboratories, and administration & faculty offices, that allow students and researchers to explore the vibrant wood industry. The AWP lab provides dedicated research spaces for developing and testing advanced wood products and leading-edge wood technologies.

These cutting-edge mass timber buildings combine exposed wood throughout, with post-tensioned CLT rocking shear walls; an innovative design and a first in North America, which significantly reduces the earthquake loads on the structure, providing a highly resilient, immediate-occupancy building. Design and construction of mass timber buildings like these require special consideration of materials, fabrication methods, integration of services and code analysis & compliance.

This presentation will highlight the range of locally sourced mass timber products in the buildings, the structural systems used (including the innovative timber-concrete composite floor systems and post-tensioned CLT rocking shear walls), key design details, challenges, and lessons learned. workforce.

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Closing Corners in Wonderland

Royce Hill, PLS US Bureau of Land Management

Ever felt like Alice in Wonderland trying to sort out the rules and terminology associated with closing, intersecting, and corners of minimum control? You are not alone. Closing corners can leave even the most battle-hardened surveyor dazed and confused. This session will step through the looking glass and further equip surveyors to face the closing corner Jabberwock.

This workshop will: 1) provide a brief history of closing corners (and related) in the Public Land Survey System (PLSS). We'll look at the forces behind why the rules never seem to quit changing; and 2) examine current closing corner terminology and rules - where are we now? Did the 2009 Manual, for example, really put an end to closing corners? Multiple types of PLSS closing corner type situations will be cussed and discussed.

Solving Wildfire Mysteries

David Blunck Blunch Research Group

Wildfires and the threat that they can pose to communities has increased drastically over the last decades. Unfortunately, the threat is anticipated to only increase in the coming years. Dr. Blunck will discuss the processes that can cause fire spread to structures, examples of research being done to better understand fire spread and concludes with a description of what can be done to reduce risks of structures burning during fires.

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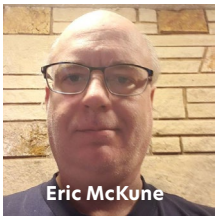
Presentations



Engineers of Destruction - The Reser Stadium Demolition Story

Eric McKune, PE Smith Monroe & Gray Engineers and Paul Rose, PE

The explosive demolition of Reser Stadium on Oregon State's campus was a big event in 2022. This presentation discusses the concepts and engineering to bring down the stadium safely. Other examples of explosive demolition will also be shared.

Stuck Between a Lake and a Hard Place, The Lake and Everett Roundabout

James Carothers, PE City of Camas, Greg Jellison, PE PBS Engineering and Environmental, and Cory Kratovil, PE PBS Engineering and Environmental

The intersection at NW Lake Rd and NW Everett St has always presented difficulties for the City of Camas. As it is the main connection point to Camas High School, provides the main east/west and North/South route in north Camas, and is bordered by not one but two lakes, a redesign required out-of-the-box thinking. This session will show you how PBS navigated those difficulties, as well as the nuances of construction during the pandemic. You will also gain knowledge on how to utilize the flexibility of roundabout geometrics with constrained environments and how to develop safe pedestrian routes at multi-lane roundabouts with high pedestrian volume and recreational users.

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Presentations

Surveying Trends Shaping Education

Michael Olsen Oregon State University - Geomatics, Surveying and Geomatics Educators Society

The role and definition of a surveyor has evolved substantially over millennia; however, the pace of change within the surveying profession during the last few decades has been astronomical. While the rapid evolution and simplification of measurement technology has made tools more accessible, educational opportunities have dwindled such that the quantity of trained professionals has been spiraling downward for decades, resulting in a dire expertise crisis within the US and many other nations across the globe. This presentation will focus on the metamorphosis of surveying education in light of the many changes, opportunities, and challenges facing licensed surveyors and licensed engineers who perform engineering surveying, the geospatial identity crisis, the rapid developments of technology, and the explosion of skills and knowledge required for modern surveying practice. Strategies and efforts supporting the expansion of the geomatics within civil engineering at Oregon State University will be highlighted as a case study and example of efforts to train the next generation surveying workforce.

OSBEELS Application Process Updates

Daren L. Cone, PE, PLS and Renee Clough, PE, PLS OSBEELS Board

Like the professions it serves, the Board's licensure application processes evolve over time due to a variety of reasons, such as technological advancements and state legislation. Understanding these changes may be overlooked by registrants once their own application process is in the rearview mirror, but the OSBEELS would like to provide an overview of recent changes to our application processes and minimal qualifications to help attendees better understand these areas of agency business. Session attendees can expect to learn about the changes that have occurred due to the implementation of the agency's new online records system, MyOSBEELS, the passage of state legislation, and the Board's recently formed Land Surveying Qualifications Task Force.

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Restoring the Oneonta Tunnel

George Freitag, CEG GRI, Molly Davis, PE David Evans and Associates, and Thomas Braibish, PE ODOT

After being abandoned for multiple decades and reconstructed in 2009, the Oneonta Tunnel was damaged by the 2017 Eagle Creek Fire and rendered unusable once again. Oregon Department of Transportation (ODOT) and Western Federal Lands Highway Division (WFLHD) partnered to prioritize rehabilitating the tunnel, which is part of the Historic Columbia River Highway State Trail, and reopening it, so the community and tourists can experience the breathtaking natural beauty of the Columbia River Gorge National Scenic Area. The team of David Evans and Associates, Inc., and geotechnical/engineering geology partner GRI supported the efforts of ODOT and WFLHD by performing a conditions assessment of the Oneonta Tunnel and Oneonta Bluff. After employing innovative technologies to safely assess conditions, the team then performed preliminary engineering to rehabilitate the tunnel to its pre-fire condition and analyzed the rockfall hazard from the bluff. Rock scaling was recommended as mitigation, and ODOT was able to expedite the majority of the rock scaling efforts ahead of tunnel construction. The tunnel was reopened in spring of 2021 and is serving the community and tourists once again.

Improving Fish Passage During Turbine Replacement on the Snake and Columbia River

Jon Renholds, PE, Brittany Heffernan, PE, and Jack McCollister, PE
U.S. Army Corps of Engineers

Passage of endangered juvenile salmonids through the Columbia and Snake River dams has a significant impact on the Columbia Hydro-Power system. New turbines designed for safer fish passage can improve operational flexibility and increase power generation. Between 1990 and 2010, the US Army Corps of Engineers studied the effects of turbine passage on juvenile salmonids. The effort improved understanding of fish passage injury and mortality mechanisms and allowed development of guidelines and criteria for designing new turbines. In 2010, a contract was awarded to Voith Hydro Inc. to collaborate with USACE engineers and biologists in the design of replacement fixed and adjustable turbine runners and other hydraulic passageway modifications to improve fish passage at Ice Harbor Dam on the lower Snake River. In 2018, a contract was awarded to GE Renewable Energy to replace turbine units using the same design process at McNary Dam on the Columbia River. This presentation will discuss the design process and the unique use of both physical hydraulic models and computational fluid dynamic models. Also discussed for Ice Harbor, the mechanical considerations of installing these fish passage modifications. Finally, it will present fish survival results for the installed fixed blade runner at Ice Harbor.