ASCE 2018 CONVENTION
DENVER, COLORADO
OCTOBER 12-15, 2018

Engineering
Innovating
Leading

Final Program
Hyatt Regency Denver at Colorado Convention Center
#ASCE18 | www.asceconvention.org
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Friday, October 12</strong></td>
<td></td>
<td><strong>Registration</strong></td>
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<tr>
<td></td>
<td>12:00 – 7:00 p.m.</td>
<td><strong>Community Service Project</strong></td>
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<td></td>
<td>1:00 – 4:30 p.m.</td>
<td><strong>Technical Tours</strong></td>
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<td>5:30 – 7:00 p.m.</td>
<td><strong>Communities &amp; Pavilion</strong></td>
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<tr>
<td></td>
<td>5:30 – 7:00 p.m.</td>
<td><strong>Welcome Reception</strong></td>
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<tr>
<td><strong>Saturday, October 13</strong></td>
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<td><strong>Registration</strong></td>
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<tr>
<td></td>
<td>6:45 a.m. – 5:00 p.m.</td>
<td><strong>Student &amp; Emerging Leaders Welcome Breakfast and Orientation</strong></td>
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<td>7:30 a.m. – 5:00 p.m.</td>
<td><strong>Communities and Pavilion</strong></td>
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<td>8:30 – 10:00 a.m.</td>
<td><strong>Opening Plenary Session &amp; Keynote with Dirk Ahlborn</strong></td>
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<td>9:00 a.m. – 1:00 p.m.</td>
<td><strong>Guest Program Orientation &amp; Tour</strong></td>
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<td>10:00 – 10:30 a.m.</td>
<td><strong>Networking Break in Pavilion, Sponsored by STV</strong></td>
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<td>10:30 – 11:30 a.m.</td>
<td><strong>Concurrent Sessions</strong></td>
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<tr>
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<td>11:45 a.m. – 1:45 p.m.</td>
<td><strong>Celebration of Leaders Luncheon</strong></td>
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<td>2:00 – 3:30 p.m.</td>
<td><strong>Concurrent Sessions</strong></td>
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<td>3:30 – 4:00 p.m.</td>
<td><strong>Networking Break in Pavilion, Sponsored by STV</strong></td>
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<td>4:00 – 5:30 p.m.</td>
<td><strong>Concurrent Sessions</strong></td>
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<td>6:00 – 9:00 p.m.</td>
<td><strong>Optional Evening Tours:</strong> <strong>Stanley Market Place or Denver Brew Tour</strong></td>
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<tr>
<td><strong>Sunday, October 14</strong></td>
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<td><strong>Registration</strong></td>
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<td>7:00 a.m. – 5:00 p.m.</td>
<td><strong>Communities and Pavilion</strong></td>
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<td></td>
<td>7:30 – 8:15 a.m.</td>
<td><strong>Networking Breakfast, Sponsored by HNTB Corporation</strong></td>
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<td>8:15 – 9:45 a.m.</td>
<td><strong>ASCE Annual Membership Meeting &amp; Society Awards</strong></td>
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<td>9:00 a.m. – 1:00 p.m.</td>
<td><strong>Optional Tour:</strong> <strong>Day at the Museum</strong></td>
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<td>10:00 – 11:30 a.m.</td>
<td><strong>Concurrent Sessions</strong></td>
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<td></td>
<td>11:30 a.m. – 1:00 p.m.</td>
<td><strong>Lunch on Your Own OR Global Luncheon &amp; Program (ticketed)</strong></td>
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<td>1:00 – 2:00 p.m.</td>
<td><strong>Concurrent Sessions</strong></td>
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<td>2:15 – 3:45 p.m.</td>
<td><strong>Industry Leaders Forum</strong></td>
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<td>3:45 – 4:15 p.m.</td>
<td><strong>Networking Beverage Break</strong></td>
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<td><strong>Concurrent Sessions</strong></td>
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<td>6:00 – 9:00 p.m.</td>
<td><strong>Optional Evening Tour:</strong> <strong>Banjo Billy Ghost Tour</strong></td>
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<td>11:30 a.m. – 1:30 p.m.</td>
<td><strong>Closing General Session &amp; Luncheon with Christine Cashen</strong></td>
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The Communities & Pavilion will be open Saturday through Monday, so stop in and visit frequently.
NETWORKING EVENTS

Events with an * require an additional fee.

Friday, October 12

12:00 – 4:30 p.m. Community Service Project*  Depart Hotel Lobby
5:30 – 7:00 p.m. Welcome Reception  Centennial Foyer

Saturday, October 13

7:15 – 8:15 a.m. Student & Emerging Leaders Welcome Breakfast and Orientation  Centennial A-D
8:30 – 10:00 a.m. Opening Plenary Session with Dirk Ahlborn  Educational Grant by ASCE Foundation  Centennial E-H
9:00 a.m. – 1:00 p.m. Guest Orientation Program and City Tour*  Agate A-C
10:00 – 10:30 a.m. Networking Break in the Pavilion  Centennial Foyer
11:45 a.m. – 1:45 p.m. Celebration of Leaders Luncheon  Centennial A-D
3:30 – 4:00 p.m. Networking Break in the Pavilion  Centennial Foyer
6:00 – 9:00 p.m. Optional Tours*  Depart Hotel Lobby

Sunday, October 14

7:30 – 8:15 a.m. Networking Breakfast  Sponsored by HTNB  Centennial A-D
8:15 – 9:45 a.m. ASCE Annual Business Meeting & Society Awards  Centennial E-H
9:00 a.m. – 1:00 p.m. Optional Tour*  Centennial A-D
11:30 a.m. – 1:00 p.m. Global Luncheon & Program*  Centennial E-H
2:15 – 3:45 p.m. Industry Leaders Forum  Centennial E-H
3:45 – 4:15 p.m. Networking Beverage Break  Centennial Foyer
6:00 – 9:00 p.m. Optional Tours*  Depart Hotel Lobby

Monday, October 15

11:30 a.m. – 1:30 p.m. Closing General Session & Luncheon with Christine Cashen  Educational Grant by ASCE Foundation  Centennial E-H

Events with an * require an additional fee.

All events are held at the Hyatt Regency Denver at the Colorado Convention Center unless otherwise noted.
Welcome!
On behalf of more than 150,000 members of the American Society of Civil Engineers, I’m excited to welcome you to Denver, the host city for the ASCE 2018 Convention.

I’m especially excited about our opening keynote speaker, the visionary Dirk Ahlborn, CEO of Hyperloop Transportation Technologies, who will give us an insider view into such a massive transformative project.

Additionally, you’ll bank valuable professional development hours and expand your skill set with sessions like “Resilient Coastal Design in an Uncertain Future,” “Interview to Win,” and “BIM for Better Bridge Design and Construction.”

I hope you’ll be able to join one of our fantastic technical tours to places like the National Earthquake Information Center, the Platte to Park Hill stormwater systems project, the National Western Complex, and the I-70 Expansion Project.

And as we are all constantly striving for work-life balance, I personally also look forward to learning how to have less stress and more fun in my life from our closing luncheon speaker, award-winning author and motivational speaker Christine Cashen.

Aside from the great convention activities, there’s so much I’m looking forward to doing in Denver. Here are a few things you may wish to check out with your family or your colleagues, old and new: Try to find the best green chile at one of Denver’s awesome eateries; escape from the hustle and bustle and take in Confluence Park with its bike trails, a minibeach, and a flowing river; shop the vinyl at Twist & Shout; and taste Denver’s awesome brewery scene, including the Great Divide, which has been around since before craft brewing was cool.

If you love civil engineering history the way I do, and don’t mind a little travel, there are also two national civil engineering historic landmarks in the area – the Moffat Tunnel and the Cheesman Dam.

Enjoy the Convention!

Sincerely,

Kristina L. Swallow, P.E., ENV SP, F.ASCE
2018 ASCE President
ASCE 2018 Convention
Host Chair
ASCE CONVENTION ADVISORY COUNCIL (ACAC)

Chair
Andrew Herrmann, P.E., SECB, F.SEI, Pres.12.ASCE

Vice Chair
Edward McGuire, P.E., F.ASCE

Glenn Bell, P.E., S.E., F.SEI, F.ASCE
Edward Stafford, P.E., PTOE, F.ASCE
Carol Haddock, P.E., M.ASCE
Kwame Agyare, P.E., ENV SP, M.ASCE
David Odeh, P.E., S.E., SECB, F.SEI, F.ASCE
Sean Corcoran, P.E., M.ASCE
Norma Jean Mattei, Ph.D., P.E., Pres.17.ASCE
Jon Zufelt, Ph.D., P.E., CFM, D.RE, M.ASCE

LOCAL PLANNING SUBCOMMITTEE (LPS)

Chair
Edward Stafford, P.E., PTOE, F.ASCE

Andi Barendt, A.M.ASCE
Alex Potvin, A.M.ASCE
Shane Binder, P.E., M.ASCE
Kim Blair, P.E., M.ASCE
Timothy R. Phelan, P.E., S.E., EIT, M.ASCE

TECHNICAL PROGRAM SUBCOMMITTEE (TPS)

Chair
Gregory Scott, P.E., M.ASCE

Vice Chair
David Odeh, P.E., S.E., SECB, F.SEI, F.ASCE

Arthur Alzamora, Jr., P.E., M.ASCE
James Anspach, F.ASCE
Clay Forister, P.E., M.ASCE
Bernie Dennis, M.ASCE
Michelle Madzelen, P.E., M.ASCE
Leah Milcarek, A.M.ASCE
Carla Palma, A.M.ASCE
Joanna Smith, P.E., M.ASCE
Reza Sheykhi, A.M.ASCE
Jon Zufelt, Ph.D., P.E., M.ASCE
Andrew Herrmann, P.E., SECB, F.SEI, Pres.12.ASCE
Edward McGuire, P.E., F.ASCE
Katie Scancarello

CONVENTION SPONSORSHIP SUBCOMMITTEE (CSS)

Chair

ASCE CONFERENCE STAFF

Elizabeth Maddox, CMP, Director, Conference & Event Services
Brandi Eden, A.M.ASCE, Manager, Conference & Event Services
Julia Weagraff, Coordinator, Conference & Event Services
Sean Scully, Sponsorship Manager
Susan Dunne, Registration Manager, Conference & Event Services
REGISTRATION HOURS

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<tr>
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<td>7:30 a.m. – 12:00 p.m.</td>
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ATTIRE

The dress code for the convention is business casual to business. Meeting room temperatures will vary, so wear layered clothing to ensure your personal comfort. We also recommend attendees wear comfortable shoes. Certain events may have specific details on attire; please refer to each event for more information.

BADGE POLICY AND RIBBONS

Your convention registration name badge is your admission to the educational sessions. Tickets are required for the pre- and post-convention events, meals, and special events. Ribbons will be available at the Registration desk. As a safety precaution, please remove your badge when leaving the hotel.

CANCELLATIONS/REFUNDS

Cancellations must be sent in writing or via e-mail by the posted deadline. All refunds are provided on a case-by-case basis and are reviewed 30 days post-convention.

REGISTRATION INFORMATION

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<tr>
<th>Registration Type</th>
<th>Events</th>
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<tr>
<td>Full Registration</td>
<td>✔️  ✔️  ✔️  ✔️</td>
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<tr>
<td>Daily 1 (Saturday)</td>
<td>✔️  ✔️  ✔️  ✔️</td>
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<td>Daily 2 (Sunday)</td>
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<td>Daily 3 (Monday)</td>
<td>✔️  ✔️  ✔️  ✔️</td>
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<tr>
<td>Guest*</td>
<td>✔️  ✔️  ✔️  ✔️</td>
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<td>Student Full</td>
<td>✔️  ✔️  ✔️  ✔️</td>
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<tr>
<td>Younger Member</td>
<td>✔️  ✔️  ✔️  ✔️</td>
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*Guest must be a non-ASCE member (a spouse or friend, for example, who is not a member of the profession)
AUTOMATED PDH TRACKING

When you arrive at the registration desk to pick up your registration badge and tickets, you will notice your name badge has a bar code in which you will use to scan in to the sessions and is specific to your registration. Before you enter the room for a pre-conference short course, technical session, or the opening plenary session, you must scan the bar code on your badge to receive PDH credit. The scanner will acknowledge a successful recording of your name for the specific session. We strongly recommend you scan your badge at the beginning of each session to eliminate any challenges and/or lines later.

Please remember, the only way to receive PDH credits is if you scan your bar code badge at the start of each session.

PROFESSIONAL DEVELOPMENT HOURS (PDHs) — EARN UP TO 14

You may earn PDHs, which are nationally recognized units of record, by attending convention concurrent sessions, technical tours, and short courses. Please note there are differences from state to state in continuing education requirements for professional engineering licensure. Each state licensing board has the final authority to approve course, credits, PDHs, and other methods of earning credits in that state. ASCE strongly recommends that individuals regularly check with their state licensing boards for specific continuing education requirements in their jurisdictions that affect professional engineering licensure and the ability to renew licensure.

MOBILE APP

Access the convention mobile app by visiting your phone’s app store and searching for AgendaPop. Download and install the AgendaPop app, then enter the Organizer Code: ASCE. Start personalizing your convention schedule, browse session information, see important last-minute changes, view speaker profiles, and contact other attendees. Stay in touch with ASCE 2018!

ASCE 2018 CONVENTION IS SOCIAL #ASCE18

See live tweets and Instagram posts on ASCE’s social wall. Follow us @ASCETweets on Twitter and @asce_hq on Instagram, and join the conversation using #ASCE18. You can also take the conversation a little deeper by engaging with fellow attendees about convention topics on ASCE’s members-only online discussion forum, Collaborate.

twitter.com/ASCETweets
Instagram.com/asce_hq
www.facebook.com/ASCE.org

CONVENTION SURVEY

Convention surveys are located on the mobile app under each session. Please fill them out and give us feedback to help make the convention better.

Sponsored by Pennoni
MEETING ROOM OVERCROWDING
ASCE will make every effort to schedule popular events in rooms large enough to accommodate anticipated attendance. Since many events are extremely popular, it is wise to select alternative events as you plan your convention schedule. ASCE and the Hyatt Regency Denver at the Colorado Convention Center are required to follow local fire regulations and may ask participants in rooms filled to capacity to choose another event.

MEDICAL EMERGENCIES
ASCE hopes that your visit to the convention will be free from illness or injury, but in case you or a family member needs medical attention during your time at the hotel, please contact the Front Desk from any house phone. Hotel security/staff will respond immediately to your location. For life-threatening emergencies, such as chest pain, shortness of breath, or severe abdominal pain call 911.

CLOSEST MEDICAL FACILITIES
Saint Joseph Hospital
1375 19th Avenue
Denver, Colorado 80218
(303) 812-2000

Downtown Denver Dental
1050 17th Street
Denver, CO 80265
(303) 296-1825

ASSUMPTION OF RISK
All ASCE events and activities are purely voluntary activities, and attendees are fully responsible for their own conduct and wellbeing, including, and without limitation, determining their level of fitness to take part in any such event or activity. In participating in any event or activity, attendees shall be deemed to understand and accept all risk of possible physical injury that might occur as a result of such participation.

NO SMOKING POLICY
Smoking is only allowed outside the Hyatt Regency Denver at the Colorado Convention Center or outside any venue hosting ASCE events.

PROGRAM AND SESSION CANCELLATION
ASCE reserves the right to cancel programs and/or sessions because of low registration. In the unlikely event of a cancellation, all registrants will be notified and will receive a refund, if applicable, for technical tours, short courses, or ticketed events. Programs and sessions are subject to change, and ASCE reserves the right to substitute a program session, and/or speaker of equal caliber to fulfill the educational requirements.

PHOTOGRAPHS
Photographs of the event may be taken by ASCE, its agents, contractors, or representatives, and such photographs may be used for any purpose at ASCE’s discretion.

TOUR POLICY
Tours will depart from the 15th street Lobby at the Hyatt Regency Denver at the Colorado Convention Center to take you to your destination. Please plan to arrive 15 minutes early, as buses will leave on time. ASCE cannot be held accountable or have the ability to provide transportation if you miss the departure time. Tours are available on a first-come, first-serve basis and have limited capacity. A separate registration fee is required to offset the costs involved with the tours. ASCE reserves the right to cancel a tour if the minimum registration is not met. Tour times are subject to change; please check with the convention front desk if you have any questions.

WEATHER
The month of October in Denver has daily highs around 68° F and daily lows of 37° F with mostly clear skies.
HOTEL

Hyatt Regency Denver at the Colorado Convention Center
650 15th Street
Denver, CO 80202
(303) 436-1234

ATTRACTIONS IN DENVER

The Denver Botanic Gardens
1007 York Street
(720) 865-3500

Mount Evans
(303) 567-4660

Denver Museum of Nature and Science
2001 N Colorado Boulevard
(303) 370-6000

Stranahan’s Colorado Whiskey Tour
200 S Kalamath Street
(303) 296-7440

Molly Brown House Museum
1340 N Pennsylvania Street
(303) 832-4092

SHOPPING

Park Meadows Retail Resort
8401 Park Meadows Center Drive
Lone Tree, CO 80124
(303) 792-2533

Cherry Creek North
(303) 394-2904
16th Street Mall
1001 16th Street
Denver, CO 80202

DENVER TRANSPORTATION

Airport Shuttle
Ride with SuperShuttle to and from the Denver airport for a fare starting at $28.00.

Taxicab
The taxi fare from the airport to downtown Denver is $55.57. The rates for Denver Yellow Cab are as follows: $2.25 for each mile and a $1.00 charge for each extra person.

Bus
Fares for the Regional Transportation District (RTD bus start at $2.35 for a local route, $4.25 for a regional route, and $8.75 to and from the airport.

Light Rail
The light rail is the train system that runs throughout Denver. Many of the stations have lots where you can park for free. A validated ticket is required to board the light rail. The fares for the light rail are $2.60 for a local route, $4.50 for a regional route, and $9.00 to and from the airport.

Airport Rail
Travelers can now use the A Line, the new rail service from Denver International Airport to LoDo’s (lower downtown) Union Station and back, courtesy of the Regional Transportation District (RTD). The cost each way is $9 per person. The Denver airport rail has six stops along the way and takes approximately 37 minutes.
ASCE firmly supports green initiatives and is pleased to work with companies doing the same. From the Hyatt Regency Denver to the ASCE 2018 Convention decorator, Alliance Exposition Services, there is a concerted effort to be environmentally friendly. Take a look below to learn how each organization in our partnership is lending a hand to keep ASCE’s conferences green. ASCE fully supports green efforts and practices, including the following:

• Tickets for social events to provide accurate counts for food and minimize waste.
• Coordination with hotel to donate leftover food to local food banks, where possible.
• Electronic promotion of the convention.
• Recycling convention signs and materials.
• Onsite recycling at the Hyatt Regency Denver.
• Bins for recycling convention badge holders.
• Water provided in rooms with pitchers and glasses to reduce plastic bottle waste.

ASCE’s decorator for the ASCE 2018 Convention has helped provide everything from logistical support to sign creation.

As ASCE’s partner, Alliance takes the following green initiatives:

• Convention signs are made of environmentally responsible components with water-based inks.
• Most employees telecommute to reduce the company’s carbon footprint.
• Metal structures are made out of aluminum, making them reusable and recyclable.

ASCE Host Hotel Hyatt Regency Denver at the Colorado Convention Center:

• Single stream recycling system in place for cardboard, paper, aluminum cans, newspapers, magazines and glass bottles.
• Recycle batteries, cooking oil, wooden pallets, and florescent bulbs.
• Recycle bins strategically placed around public space of hotel including meeting spaces, restaurants, and bars.
• Recycle bins have been placed in all guest rooms.
• Used guest room amenities are being donated to local shelter.
• Recycle bins have been placed in all back of house areas including banquet floors, offices, kitchen, loading dock areas, and purchasing spaces.
• Started Green Team of managers in order to ensure we are keeping up with new initiatives.
• Biodegradable food service items are being used for carryout food orders.
• Hotel provided reusable drinking containers to all our employees for water and hot beverages to reduce use of disposable paper products.
• No longer deliver newspapers to every guest room. We have newspaper racks on each floor by the elevator for guests to take a paper if they would like one.
• Moving to 100% post-consumer tissue products in guestrooms.
• Composting of all left over food products within staff cafeteria, banquets, and kitchen.
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COMMUNITIES & PAVILION, BOOKSTORE, AND MEMBERSHIP/MERCHANDISE

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YOUR CONVENTION ACTIVITIES CHECKLIST

- Visit Communities & Pavilion
- Social Media Post
- Visit Foundation & Make a Donation
- Buy a Book!
- Visit Platinum Sponsors
- Learn what’s new at ASCE
- Selfie with Phil
- Get ASCE merchandise

Communities & Pavilion will be closing at 12:00 p.m. on Monday, October 15, so please pick up any purchases or prize winnings prior to closing.
Your Foundation, Your Future.

Can you imagine if there was no Concrete Canoe Competition, ExCEEd or Dream Big film?

Make a gift of $5,000, today, to join the ASCE Foundation’s JLVC Giving Society—to ensure that doesn’t happen.

Visit the ASCE Foundation in the communities and pavilions to make your gift today.
ASCE MEMBERSHIP CENTER
Come and join us at the ASCE Membership Center! We will be there to provide a full array of member services such as joining ASCE, renewing your membership, getting your member pin, getting answers to questions about your membership and its benefits, and more! Come and browse the latest exclusive ASCE apparel, office and desk accessories, travel items, and more on display.

MEMBER BENEFITS
GEICO – ASCE members can save even more on GEICO auto insurance with a special member discount. GEICO can also help you with homeowners, renters, condo insurance, personal umbrella protection, motorcycle, RV, boat, and much more. Visit GEICO or call (800) 368-2734 to see how much you could save.

Pearl Insurance – Learn how your ASCE membership grants you exclusive access to quality insurance programs that are customized to fit your unique needs. Enjoy competitive group rates on a range of plans, including coverage for disability, life, long-term care, and professional liability insurance. Affordable insurance plans are within your reach, and they’ve never been so easy to obtain. Let Pearl Insurance help you get started today; visit www.asceinsurance.com or call (800) 650-ASCE (2723).

GOVERNMENT RELATIONS & INFRASTRUCTURE INITIATIVES
ASCE Government Relations and Infrastructure Initiatives serves as the voice of the civil engineering profession in federal and state policymaking, and with the media and coalition groups. Through the Infrastructure Report Card, state Report Cards, and other policy reports, coupled with direct lobbying of federal and state legislators, and the Key Contact Program, ASCE raises awareness about the need to invest in and modernize our nation’s infrastructure. ASCE Foundation Continuing Education
ASCE has been committed to providing top-quality continuing education for civil engineers and related professionals for more than 40 years. ASCE’s continuing education program includes Live Webinars, Face-to-Face Seminars, On-Demand Learning, Customized On-Site Training, and online P.E. Exam Review courses.

ASCE also offers Guided Online Courses, highly interactive, instructor-led, state-of-the-practice 12-week online courses featuring rigorous, in-depth coverage of topics with frequent student-instructor and peer-to-peer interaction, and flexibility for students. Courses include video lectures, case studies, and other interactive course content, and discussion forums. Brochures will be available.

Engineering Programs
Each year, more than 7,000 civil engineering professionals contribute or volunteer their technical expertise that benefits the Society and the profession through participation on the technical and professional committees that are part of an Institute or Committee on Technical Advancement (CTA).

The Society has nine Institutes created to serve the needs of professionals working within specialized fields of civil engineering. The Society’s institutes are the Architectural Engineering Institute (AEI); the Coasts, Oceans, Ports, and Rivers Institute (COPRI); the Construction Institute (CI); the Engineering Mechanics Institute (EMI); the Environmental and Water Resources Institute (EWRI); the Geo-Institute (G-I); the Structural Engineering Institute (SEI); the Transportation and Development Institute (T&DI); and the Utility Engineering and Surveying Institute (UESI).

ASCE’s Committee on Technical Advancement (CTA) encompasses a variety of specialized areas of civil engineering and houses the administration of the Society’s codes and standards program.

The Society’s credentialing program, housed in Civil Engineering Certification Inc. (CEC), is also managed as an integral part of the Engineering Programs division.
CONCRETE CANOE COMPETITION
Colorado State University will have their concrete canoe in the communities and pavilion area! Top on by and hear all the specifics of their canoe.

Platinum Sponsors

COMMUNITIES & PAVILION
Looking for the most up-to-date information on all things ASCE? Come to ASCE Communities to shop the latest ASCE Merchandise, have all your membership questions answered, browse for insurance, and more. Stop by, visit, relax, and obtain vital information because you are at home with ASCE.

MOBILE APP
Access the convention mobile app by visiting your phone’s app store and searching for AgendaPop. Download and install the AgendaPop app, then enter the Organizer Code: ASCE. Start personalizing your convention schedule, browse session information, see important last-minute changes, view speaker profiles, and contact other attendees. Stay in touch with ASCE 2018!

Sponsored by

COMMUNITIES & PAVILION (continued)

SELFIE WITH PHIL
Phil the Philanthropist is the ASCE Foundation mascot, and he loves to spend time with civil engineers! Take a selfie with Phil in Denver, and then post it to your social media channel of choice using the convention hashtag (#ASCE18). For each selfie you post, you will be entered to win a complimentary registration to the ASCE 2019 Convention and a chance to party with Phil in Miami, Florida. The winner will be announced during the Closing General Session. Simply pick up Phil from the Foundation booth or the convention registration desk (he’s the cute hedgehog).

MEMBER COMMUNITIES
ASCE’s global member communities, including Region, Section, Branch, and Group members, younger members, and student members, are supported by the Member Communities Division. The division also supports the Member Communities Committee and constituent committees (Committee on Student Members, Committee on Younger Members, and Leader Training Committee) and the Global Strategy Council as they provide member support, engagement, and communication.

PROFESSIONAL ACTIVITIES
Professional Activities provides vision, leadership, and direction to ASCE and its members concerning professionally related issues from the time a civil engineer attains an undergraduate degree. We offer professional practice resources on continuing professional development, the civil engineering team, diversity and inclusion, leadership, licensure, management, and public awareness of the civil engineer. More information is also available on request from professional@asce.org.

JOIN ASCE IN MIAMI, FLORIDA FOR THE ASCE 2019 CONVENTION
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>12:00 – 7:00 p.m.</td>
<td>Registration</td>
<td>Centennial Foyer</td>
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<tr>
<td>1:00 – 4:30 p.m.</td>
<td>Technical Tours</td>
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<td></td>
<td>National Earthquake Information Center</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<td>Platte to Park Hill</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<td>National Western Complex</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<td></td>
<td>I-70 Expansion Project</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<td>Center for Infrastructure, Energy &amp; Space Testing at the University of Colorado, Boulder</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<td>City of Boulder Wastewater Treatment Plant</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<tr>
<td>12:00 – 4:30 p.m.</td>
<td>Community Service Project</td>
<td>Depart Hotel Lobby 15th Street Entrance</td>
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<tr>
<td>5:30 – 7:30 p.m.</td>
<td>Community &amp; Pavilion</td>
<td>Centennial Foyer</td>
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<tr>
<td>5:30 – 7:00 p.m.</td>
<td>Welcome Reception</td>
<td>Centennial E-H</td>
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</tbody>
</table>

*Come to the Communities & Pavilion today to see what’s new with ASCE.*
COMMUNITY SERVICE PROJECT
12:00 – 4:30 p.m.
Maximize your personal and professional experience and be part of this endeavor! ASCE will be working with Extreme Community Makeover to clean up alleyways. There is a minimal charge to support the event, and proceeds will be donated to the project. Your schedule won’t allow you to attend, but you still want to give back to the community? Make a donation via your registration, and a portion of the donation will be tax deductible. Make a difference and leave Denver’s alleyways cleaner. Check the convention website for more details. Get involved, give back, and register today!

Meet at 15th street lobby at the Hyatt Regency at the Colorado Convention Center.
Tours will depart from the 15th street Hyatt Regency Denver at the Colorado Convention Center Lobby to take you to your destination. Please plan to arrive 15 minutes early, as buses will leave on time. ASCE cannot be held accountable or have the ability to provide transportation if you miss the departure time. Tours are available on a first-come, first-serve basis and have limited capacity. A separate registration fee is required to offset the costs involved with the tours. ASCE reserves the right to cancel a tour if the minimum registration is not met. Tour times are subject to change. Please check with the registration desk if you have any questions. You may purchase additional tickets for the following technical tours at the registration desk.

**NATIONAL EARTHQUAKE INFORMATION CENTER**
1:00 – 4:00 p.m.
Registration: $55

**PLATTE TO PARK HILL**
Ticket Price: $55
Stormwater Systems is taking a comprehensive approach to better protecting people and property against flooding while improving water quality and enhancing public spaces. Four projects are part of the Platte to Park Hill: Stormwater Systems program:

- Globeville Landing Outfall and Park
- City Park Golf Course Redesign
- 39th Avenue Greenway and Open Channel
- Parkhill Detention

Each project is being designed independently, but is part of a coordinated construction process to realize cost savings and project efficiencies, as well as ensure compatibility with other nearby improvements. The total cost of the program is $298 million dollars. The tour will focus on two of the four projects.

**City Park Golf Course** is an 18-hole municipal golf course that is being redesigned to integrate approximately 220 Ac-ft of Stormwater Detention and Water Quality Features. The Project was procured as a design-build contract that Saunders Construction was awarded. Construction of this project kicked off late in 2017 and is on schedule to open at the start of summer in 2019.

After City Park Golf Course, we will travel to the downstream end of the **39th Avenue Greenway Project**. This project will replace the city’s aging infrastructure with green infrastructure that can better control stormwater and improve public safety and water quality. In addition to protecting neighborhoods from damaging floodwaters when storms hit, the greenway will provide other neighborhood benefits that will be enjoyed year-round including recreation space and a multi-use trail corridor. The project includes just under over 5,000 feet of open channel and approximately 1 mile of large storm drainage pipe and associated infrastructure. Construction challenges in this urban environment include land acquisition, environmental risks, traffic management, and community outreach. The project was procured as a design-build contract that SEMA Construction was awarded. Construction of this project will start in early Summer of 2018. The tour will visit the most downstream section of the greenway where we should be installing large transition structures and reinforced concrete box conduits. The project connects at this end to the Globeville Landing Project which will have completed two 96” diameter borings beneath 400’ of railway corridor.
TECHNICAL TOURS (continued)

NATIONAL WESTERN COMPLEX
Registration: $55
We begin each tour with a short presentation, then proceed to a walking/bus riding tour that takes roughly 60 minutes. Below is a sample agenda for tours:
1:20 p.m. Arrival to room
1:30 p.m. Introductions
1:35 p.m. Campus Overview
1:45 p.m. CSU Buildings Update
1:55 p.m. WSSA Update
2:05 p.m. Presentation close, hand out safety gear and begin tour
3:30 p.m. End tour

I-70 EXPANSION PROJECT
Registration: $55
Central 70 is a 10-mile interstate reconstruction project from Brighton Boulevard to Chambers Road. This project will widen the interstate to accommodate an additional express lane will be added in each direction. The aging viaduct between Brighton and Colorado boulevards will be removed and replaced with a lowered grade section of roadway. Above this lowered section, a 4-acre cover park will be built between Columbine and Clayton streets, reconnecting the Elyria-Swansea neighborhood back to Denver.

Construction is started this summer and the tour will demonstrate some of the early work that is underway to prepare for the widening of the interstate.

CENTER FOR INFRASTRUCTURE, ENERGY & SPACE TESTING AT THE UNIVERSITY OF COLORADO, BOULDER
Registration: $55
The center provides a centrally managed experimental testing facility offering geotechnical centrifuge, structural dynamics and materials testing. The facility boasts unique large-scale, fast loading rate, gravitational and environmental control capabilities.
www.colorado.edu/center/ciest

CITY OF BOULDER WASTEWATER TREATMENT PLANT
Registration: $55
This facility serves the city of Boulder and treats an average of 12.5 million gallons of wastewater per day. Recent upgrades include an ultraviolet light disinfection system that replaces the previous chlorine gas and sulfur dioxide gas system. Another upgrade includes working with a local bear brewery on a pilot program to use byproducts from the brewery process in the wastewater treatment process to reduce nitrate discharge levels.

CONVENTION SURVEY
Convention surveys are located on the mobile app under each session. Please fill them out and give us feedback to help make the convention better.
WELCOME RECEPTION
5:30 – 7:00 p.m. | Centennial E-H

ASCE’s Welcome Reception invites you to explore your FUN side in Denver! What better way to kick off your ASCE 2018 Convention experience than discovering your inner child while satisfying your thirst, sating your hunger, and most importantly, learning what Denver has to offer. Stayed tuned to ASCE social media connections and the convention website for breaking news and updates.
<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>6:45 a.m. – 5:00 p.m.</td>
<td>Registration</td>
<td>Centennial Foyer</td>
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<tr>
<td>7:15 – 8:15 a.m.</td>
<td>Student &amp; Emerging Leaders Welcome Breakfast and Orientation</td>
<td>Centennial A-D</td>
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<td>7:30 a.m. – 5:00 p.m.</td>
<td>Communities and Pavilion</td>
<td>Centennial Foyer</td>
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<tr>
<td>8:30 – 10:00 a.m.</td>
<td>Opening Plenary Session &amp; Keynote with Dirk Ahlborn</td>
<td>Centennial E-H</td>
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<tr>
<td>9:00 a.m. – 1:00 p.m.</td>
<td>Guest Program Orientation &amp; Tour</td>
<td>Agate A-C</td>
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<tr>
<td>10:00 – 10:30 a.m.</td>
<td>Networking Break in Pavilion</td>
<td>Centennial Foyer</td>
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<tr>
<td>10:30 – 11:30 a.m.</td>
<td><strong>Concurrent Sessions I</strong></td>
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<tr>
<td>HH – Building the Eads Bridge</td>
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<td>Capitol 1-3</td>
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<tr>
<td>MDT – Multidisciplinary Planning &amp; Implementation – Envision Shooks Run Project</td>
<td>Mineral D-E</td>
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<tr>
<td>PD – How to Interview to Win Project</td>
<td>Capitol 4</td>
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<tr>
<td>PD – Professional Development Initiatives for the Millennial Engineer</td>
<td>Capitol S-7</td>
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<td>SP – Ikitelli City Hospital Seismic Design</td>
<td>Mineral B-C</td>
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<tr>
<td>STI – Age of Electronic Applications – Electronic Preliminary Engineering Report – ePER</td>
<td>Mineral F-G</td>
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<tr>
<td>11:45 a.m. – 1:45 p.m.</td>
<td>Celebration of Leaders Luncheon</td>
<td>Centennial A-D</td>
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<tr>
<td>2:00 – 3:30 p.m.</td>
<td><strong>Concurrent Sessions II</strong></td>
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<tr>
<td>NMD – Advancing Community Resilience Through Civil Engineering</td>
<td>Mineral D-E</td>
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<td>PD – Canon 8: Ethics of Diversity &amp; Inclusion</td>
<td>Capitol 5-7</td>
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<tr>
<td>SP – Redevelopment and Modernization Strategies for Our National Airport</td>
<td>Capitol 4</td>
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<tr>
<td>SI – Planning for Implementing Reliable and Resilient Infrastructure</td>
<td>Mineral F-G</td>
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<tr>
<td>STI – Engineering Licensure – An Asset Facing Challenges</td>
<td>Mineral B-C</td>
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<tr>
<td>Civil Engineering Magazine Presents – Ready for Today – and Tomorrow</td>
<td>Capitol 1-3</td>
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<tr>
<td>3:30 – 4:00 p.m.</td>
<td>Networking Break in Pavilion</td>
<td>Centennial Foyer</td>
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<tr>
<td>4:00 – 5:30 p.m.</td>
<td><strong>Concurrent Sessions III</strong></td>
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<tr>
<td>HH – Colorado Water: History Lessons for Today’s Water Professional</td>
<td>Mineral D-E</td>
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<tr>
<td>MDT – Utilizing UAS to Improve Bridge Inspections</td>
<td>Capitol 4</td>
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<tr>
<td>NMD – Resilient Coastal Design in an Uncertain Future</td>
<td>Mineral B-C</td>
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<tr>
<td>PD – Experts on Ethics: A Panel Discussion</td>
<td>Mineral F-G</td>
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<tr>
<td>SI – CAV: Impact to Engineers, Infrastructure, &amp; Policy</td>
<td>Capitol 1-3</td>
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<tr>
<td>STI – BIM for Better Bridge Design and Construction</td>
<td>Capitol S-7</td>
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<tr>
<td>6:00 – 9:00 p.m.</td>
<td>Optional Evening Tours: Stanley Market Place or Denver Brew Tour</td>
<td>Depart Hotel Lobby</td>
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**Convention Topics:**
- HH – History & Heritage
- MDT – Multidiscipline Technical
- NMD – Natural & Man-Made Disasters
- PD – Professional Development
- SI – Strategic Issues / Public Policy
- SP – Significant Projects
- STI – State of the Industry / Profession

*Come to the Communities & Pavilion today to see what’s new with ASCE.*
Join associates and friends for the opening session of the ASCE 2018 Convention, moderated by ASCE 2018 Convention Local Chair Edward Stafford, P.E., PTOE, F.ASCE with remarks from ASCE 2018 President Kristina Swallow, P.E., ENV SP, F.ASCE, and featuring the keynote speech from Dirk Ahlborn CEO, HyperloopTT.

Moderator, Edward Stafford, P.E., PTOE, F.ASCE, Chair, Local Planning Subcommittee

Presidential Remarks Kristina Swallow, P.E., ENV SP, F.ASCE, 2018 ASCE President

Opening Keynote Address:
Dirk Ahlborn, CEO
HyperloopTT

In August 2013, Elon Musk published the Hyperloop white paper, detailing a new mode of transportation: a passenger capsule that travels at 760 MPH (1,220km/h). Hyperloop Transportation Technologies, Inc. (HyperloopTT) rose to the challenge of bringing the hyperloop to reality.

In his talk, Dirk Ahlborn, the CEO of HyperloopTT, will give the audience an insider’s view into such a massive transformative project. The audience will learn why we need innovative transportation solutions, how to scale disruptive projects by using crowd-sourcing and crowd-collaboration, and what may come next in the world of the hyperloop traveling.
STUDENT & EMERGING LEADERS WELCOME BREAKFAST & ORIENTATION
7:15 – 8:15 a.m. | Centennial A-D
(By invitation only)
Yes, it is still scheduled for 7:15 a.m., and it’s still a great way for you to kick off the day to greet, meet, and eat with fellow students from across the nation and around the world! You’ll have time to network with ASCE leadership and VIPs, meet the ASCE Convention committees, and mingle with local students who know all about where to go and what to see while in Denver! It’s great food, fun challenges and prizes, and an opportunity to learn more about how to maximize your time at ASCE 2018.

GUEST ORIENTATION, WELCOME BREAKFAST, & CITY TOUR
9:00 a.m. – 1:00 p.m. | Agate A-C
The Denver Convention and Visitors Bureau will be hosting an orientation & breakfast to get you acquainted with the city and all it has to offer. The city tour will follow immediately after and we don’t just show you the highlights of downtown; we introduce you to Denver, its history, culture and current events. Travel through the various parts of the city and receive an overview of all the must-see attractions. Lunch will be on your own.

Get a great overview of the Mile High City, including Colorado’s spectacular Capitol building featuring an official altitude marker where you can stand exactly one “Mile” High! Tour beautiful Denver, including Lower Downtown (LoDo) and Larimer Square. Tour inside the elegant and historic Brown Palace Hotel or Molly Brown House, where guides tell tales about the historic home of the ‘unsinkable’ Molly Brown. See magnificent parks and neighborhoods and drive by the Bronco’s Mile High Stadium and Coors Field. Fall in love with the Mile High City!

Guest Program* Registration Fee: ONS: $400
* The guest program is only open to guests of a full registrant.
Phil the Philanthropist, the ASCE Foundation mascot, wants to explore Denver!

Share your photo of Phil around the city for a chance to win free registration to the 2019 Convention!

Use the hashtags #FoundationPhil and #ASCE18 to participate. The winner will be announced at the Closing General Session.

Follow @ascefoundationphil on Instagram

Photo Credit: Rich Grant and VISIT DENVER
CELEBRATION OF LEADERS LUNCHEON
11:45 a.m. – 1:45 p.m. | Centennial A-D
Celebrate with us as we formally induct recipients of the Society’s highest recognition – Distinguished Member.

Congratulations to the Distinguished Member Class of 2018

James H. Anspach, PG, Dist.M.ASCE
Robert E. Bachman, P.E., S.E., F.SEI, Dist.M.ASCE
Anthony S. Bartolomeo, P.E., ENV SP, Dist.M.ASCE
Thomas P. Bostick, Ph.D., P.E., Dist.M.ASCE, NAE
Catherine E. Wolfgram French, Ph.D., P.E., Dist.M.ASCE
James H. Garrett, Jr., Ph.D., P.E., Dist.M.ASCE
Edward Kavazanjian, Jr., Ph.D., P.E., D.GE, Dist.M.ASCE, NAE
Hugo A. Loaiciga, Ph.D., P.E., D.WRE, Dist.M.ASCE
Joseph E. Minor, Ph.D., P.E., Dist.M.ASCE
Jose D. Salas, Ph.D., Dist.M.ASCE
CONCURRENT SESSIONS I

10:30 – 11:30 a.m.

PDHs: 1.0

HH | Capitol 1-3
BUILDING THE EADS BRIDGE
Moderator: Bernie Dennis, Jr., M.ASCE, U.S. Department of State
Speaker: Raymond Paul Giroux, Dist.M.ASCE, Senior Engineer, Kiewit Infrastructure West Co.

MDT | Mineral D-E
MULTIDISCIPLINARY PLANNING & IMPLEMENTATION - ENVISION SHOKKS RUN PROJECT
Speakers: Aaron Egbert, P.E., Public Works, City of Colorado Springs; Justine A. Fedde, P.E., Transportation Engineer, Felsburg Holt & Ullevig; Dan Krueger, P.E., Associate, Felsburg Holt & Ullevig; Richard Shaw, PLA – Principal, Design Workshop

PD | Capitol 4
HOW TO INTERVIEW TO WIN PROJECT
Speakers: David T. Williams, Ph.D., P.E., FASCE, F.EWRI, CFM, PH, CPESC, President, David T. Williams and Associates

SP | Mineral B-C
IKITELLI CITY HOSPITAL SEISMIC DESIGN
Speakers: Lauren Biscombe, P.E., Engineer, Arup; Aysegul Gogus, SE Ph.D., Senior Engineer, Arup; Murat Melek, SE Ph.D., Associate, Arup; Nami Rokhgar, MSc, Engineer, Arup

STI | Mineral F-G
AGE OF ELECTRONIC APPLICATIONS – ELECTRONIC PRELIMINARY ENGINEERING REPORT – EPER
Speakers: Nicole Schindler, Senior Engineer, U.S. Department of Agriculture – Rural Development Rural Utilities Service – Water Environmental Programs

PD | Capitol 5-7
PROFESSIONAL DEVELOPMENT INITIATIVES FOR THE MILLENNIAL ENGINEER

CONCURRENT SESSIONS II

2:00 – 3:30 p.m.

PDHs: 1.5

NMD | Mineral D-E
ADVANCING COMMUNITY RESILIENCE THROUGH CIVIL ENGINEERING
Speakers: Andre R. Barbosa, Ph.D., Associate Professor, Oregon State University; Glenn R. Bell, P.E., S.E., C.Eng., SECB, FSEI, FASCE, Senior Principal and Chairman, Simpson Gumpertz & Heger Inc.; Dave Bergner; Mikhail Gershfeld, M.ASCE, P.E., S.E., Professional Practice Professor, California State Polytechnic University, Pomona; Theresa P. McAllister, Ph.D., P.E., FSEI, Community Resilience Group Leader and Program Manager, National Institute of Standards and Technology; John W. Van De Lindt, Ph.D., George T. Abell Distinguished Professor in Infrastructure, Co-Director, Center for Risk-Based Community Resilience Planning, Colorado State University

PD | Capitol 5-7
CANON 8: ETHICS OF DIVERSITY & INCLUSION
Speakers: Quincy G. Alexander, Chief, Sensor Integration Branch, Engineer Research and Development Center; Brock E. Barry, P.E., Ph.D., FASCE, Professor of Engineering Education, U.S. Military Academy; West Point; Michael J.K. Milligan, Ph.D., P.E., Chief Executive Officer, ABET; Melissa Wheeler, M.ASCE, Past Region 5 Director; Yvette Pearson, Ph.D., Associate Dean for Accreditation and Assessment, Rice University

SP | Capitol 4
REDEVELOPMENT AND MODERNIZATION STRATEGIES FOR OUR NATIONAL AIRPORT
Speakers: Matt Breidenthal, P.E., SE, Senior Vice President, HOK; Brian Johnson, P.E., BEMP, LEED AP BD+C, WELL AP, Project Engineer, HOK; Claire Moore, SE, Senior Vice President, HOK; Richard Saunders, P.E., SE, Senior Structural Engineer, HOK; Bart Van Vilet

SI | Mineral F-G
PLANNING FOR IMPLEMENTING RELIABLE AND RESILIENT INFRASTRUCTURE
Speakers: Shelley Cobau, CFM, Public Works Director, City of Manitou Springs; Rares Petrica; Dennis Albert Randolph, P.E., M.ASCE, PTOE, PTP, Env SP, Director of Public Works, City of Grandview Missouri; Mark Reiner, Ph.D., P.E., Co-Founder, CEO, WISRD, LLC

STI | Mineral B-C
ENGINEERING LICENSURE: AN ASSET FACING CHALLENGES
Speakers: Angela R. Bielefeldt, Ph.D., P.E., M.ASCE, Professor, University of Colorado Boulder; Albert Downs, Policy Specialist - Employment, Labor & Retirement, National Conference of State Legislatures; Marlon W. Vogt, P.E., M.ASCE, FSEI, Project Manager, Ullevig Engineers

Civil Engineering Magazine Presents | Capitol 1-3
READY FOR TODAY – AND TOMORROW

Join ASCE in Miami, Florida for the ASCE 2019 Convention / 29
CONCURRENT SESSIONS III

4:00 – 5:30 p.m.
PDHs: 1.5

HH | Mineral D-E
COLORADO WATER: HISTORY LESSONS FOR TODAY’S WATER PROFESSIONAL
Moderator: Theodore N. Green, P.E., M.ASCE, Project Manager
Speakers: Neil Sadler Grigg, Ph.D., P.E., F.ASCE, Professor of Civil and Environmental Engineering, Colorado State University; Darell D. Zimbelman, Ph.D., P.E., D.WRE, M.ASCE, General Manager/Chief Engineer, Water Systems Ops and Management LLC

MDT | Capitol 4
UTILIZING UAS TO IMPROVE BRIDGE INSPECTIONS
Speakers: Barritt Lovelace, P.E., Regional Manager, Collins Engineers

NMD | Mineral B-C
RESILIENT COASTAL DESIGN IN AN UNCERTAIN FUTURE
Speakers: Kate Boicourt, MEsc, Program Manager, Waterfront Alliance; Kenneth Huber, P.E., Senior Project Manager, Langan Engineering & Environmental Services; Roland Lewis, JD, MUP, President and CEO, Waterfront Alliance; Drew Fred Markewicz, NJ P.E., PMP, Senior Project Manager, NVS; Shea Thorvaldsen, Director, Infrastructure and Marine, McLaren Engineering Group; Bret M. Webb, Ph.D., P.E., D.CE, M.ASCE, Professor, University of South Alabama

STI | Capitol 1-3
CAV: IMPACT TO ENGINEERS, INFRASTRUCTURE, POLICY
Speakers: Jeff Bridges, Representative, Colorado State House; King Gee, Director of Engineering and Technical Services, Association of State Highway and Transportation Officials; Blaine Leonard, P.E., D.GE, Pres.10.ASCE, Technology & Innovation Engineer, Utah Department of Transportation; Richard Mudge, President and Founder, Compass Transportation and Technology Inc.

PD | Mineral F-G
EXPERTS ON ETHICS: A PANEL DISCUSSION
Speakers: Brock E. Barry, P.E., Ph.D., F.ASCE; Professor of Engineering Education, U.S. Military Academy; West Point; Joshua Ben Kardon, SE, Ph.D., F.ASCE; Principal Structural Engineer, Joshua B. Kardon and Co.; Ranjit S. Sahai, P.E., F.ASCE, President & CEO, RAM Corporation

CONVENTION SURVEY
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**STANLEY MARKET PLACE**

6:00 – 9:00 p.m.

Tour Fee: EB: ONS: $125

The Stanley Marketplace is a 1950’s aviation production facility that is a community-inspired gathering space and food centric marketplace! It is a host to authentic little places that are getting their first start. Rolling Smoke BBQ, Cheluna Brewing Company, and the Denver Biscuit Company just to name a few. Turning an old rusty ejection seat factory into a marketplace took some work, but the creators were careful to keep the charm and vintage feel intact.

Spend the evening dining, shopping and creating at this newly reinvented space! You won’t be disappointed.

*Group is welcome to dine on their own at a dozen different locations within the Stanley.*

**DENVER BREW TOUR**

6:00 – 9:00 p.m.

Tour Fee: ONS: $115

Colorado is well known for their microbreweries and overall love of all things beer. If you are interested in learning more about the history of beer, how it is made, what the different types are, how they differ, and why Denver has been dubbed the “Napa Valley of Beer” this is the tour for you! This walking tour will take you to 3 different local breweries where you will get to sample their favorite beers and take a look behind the scenes of all the action.
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<th>Time</th>
<th>Event</th>
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<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration</td>
<td>Centennial Foyer</td>
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<td>7:30 – 8:15 a.m.</td>
<td>Networking Breakfast</td>
<td>Centennial Foyer</td>
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<td>8:15 – 9:45 a.m.</td>
<td>ASCE Annual Membership Meeting &amp; Society Awards</td>
<td>Centennial E-H</td>
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<td>9:00 a.m. – 1:00 p.m.</td>
<td><strong>Optional Tour:</strong> Day at the Museum</td>
<td>Depart Hotel Lobby</td>
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<td>10:00 – 11:30 a.m.</td>
<td><strong>Concurrent Sessions IV</strong></td>
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<td>HH: Chronicling Life and Career of Three Civil Engineers</td>
<td>Mineral F-G</td>
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<td>MDT: Volunteers Bring Infrastructure Improvements to Under-served Communities</td>
<td>Capitol 1-3</td>
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<td>NMD: Mitigating Expansive Soils in Residential Construction</td>
<td>Capitol 4</td>
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<td>PD: Public Speaking, Presentation and Communication Skills Needed for Success</td>
<td>Mineral B-C</td>
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<td>STI: Global Perspective: Civil Engineering Practice</td>
<td>Capitol 5-7</td>
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<td><strong>ASCE Presents:</strong> The Greatest Show on Earth! The OCEA’s</td>
<td>Mineral D-E</td>
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<td>11:30 a.m. – 1:00 p.m.</td>
<td>Option 1: Lunch on Your Own</td>
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<td>Option 2: Global Luncheon &amp; Program (ticketed)</td>
<td>Centennial A-D</td>
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<td>1:00 – 2:00 p.m.</td>
<td><strong>Concurrent Sessions V</strong></td>
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<td>MDT: Design, Construction and Performance DOE Solar Decathlon</td>
<td>Capitol 5-7</td>
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<td>PD: Tools Ensuring Effective Preparation / Testimony as an Engineer</td>
<td>Mineral F-G</td>
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<td>SP: Project Neon: Nevada’s Largest Public Works Project</td>
<td>Capitol 4</td>
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<td>SI: Advancing Educational and Professional Standards for CEs</td>
<td>Capitol 1-3</td>
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<td>NMD: Resiliency: An Integral Part of Projects</td>
<td>Mineral B-C</td>
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<td><strong>Distinguished Lecture Series:</strong> Bethany Eisenberg</td>
<td>Mineral D-E</td>
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<tr>
<td>2:15 – 3:45 p.m.</td>
<td><strong>Industry Leaders Forum</strong></td>
<td>Centennial E-H</td>
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<td>3:45 – 4:15 p.m.</td>
<td>Networking Beverage Break</td>
<td>Centennial Foyer</td>
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<tr>
<td>4:15 – 5:15 p.m.</td>
<td><strong>Concurrent Sessions VI</strong></td>
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<td>HH: Building the Transcontinental Railroads and Bridges Named after Engineers</td>
<td>Mineral D-E</td>
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<td>NMD: Engineering Climate Adaptation to Caribbean Hurricanes</td>
<td>Capitol 1-3</td>
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<td>SP: 5 Mile, $750M Belt Parkway Project, Brooklyn, NY</td>
<td>Capitol 4</td>
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<td><strong>Younger Member Spotlight</strong></td>
<td>Mineral F-G</td>
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<td>SI: Designing Corporate Social Impact to Engage and Grow</td>
<td>Capitol 5-7</td>
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<td><strong>SI: Mitigation Saves:</strong> Benefit - Cost Analysis of Exceeding I Code</td>
<td>Mineral B-C</td>
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<td>6:00 – 9:00 p.m.</td>
<td><strong>Optional Evening Tour:</strong> Banjo Billy Ghost Tour</td>
<td>Depart Hotel Lobby</td>
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**Convention Topics:**
HH – History & Heritage
MDT – Multidiscipline Technical
NMD – Natural & Man-Made Disasters
PD – Professional Development
SI – Strategic Issues / Public Policy
SP – Significant Projects
STI – State of the Industry/Profession

• Have you visited the Communities & Pavilion today?
**NETWORKING BREAKFAST**
7:30 – 8:15 a.m. | Centennial A-D
Join your friends and colleagues to catch up and network in advance of the ASCE Annual Membership Meeting.

**ASCE ANNUAL BUSINESS MEETING AND SOCIETY AWARDS**
8:15 – 9:45 a.m. | Centennial E-H
ASCE kicks off Sunday morning by celebrating the success and achievements of the Society as reported by ASCE Executive Director Thomas W. Smith III, ENV SP, CAE, F.ASCE. He is joined by 2018 ASCE President, Kristina L. Swallow, P.E., ENV SP, F.ASCE to present ASCE Society awards and install your new Officers. The meeting concludes with inaugural remarks from 2019 ASCE President, Robin A. Kemper, P.E., LEED AP, F.SEI, F.ASCE.

**GLOBAL LUNCHEON & PROGRAM**
11:30 a.m. – 1:00 p.m. | Centennial A-D
Take advantage of this unique networking opportunity to meet with global colleagues and discuss issues affecting civil engineers around the world. Enjoy lunch and witness the renewal of several agreements of cooperation with fellow societies. Stop by the registration desk to inquire about purchasing a ticket.
Ticket Prices: $90

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**Thomas W. Smith III, ENV SP, CAE, F.ASCE**, ASCE Executive Director

**Kristina L. Swallow, P.E., ENV SP, F.ASCE**, 2018 ASCE President

**Inaugural Remarks**

**Robin A. Kemper, P.E., LEED AP, F.SEI, F.ASCE**, 2019 ASCE President
CONCURRENT SESSIONS IV
10:00 – 11:30 a.m.
PDHs: 1.5

HI | Mineral F-G
CHRONICLING LIFE AND CAREER OF THREE CIVIL ENGINEERS
Moderator: Theodore N. Green, P.E., M.ASCE, Project Manager
Speakers: Reuben F. Hull, Jr., P.E., PMP, LEED Green Assoc., M.ASCE, Regional Director, McLaren Engineering Group; J. David Rogers, Department of Geological Engineering; William Vermes, P.E., Senior Bridge Engineer, Pennoni

MDT | Capitol 1-3
VOLUNTEERS BRING INFRASTRUCTURE IMPROVEMENTS TO UNDER-SERVED COMMUNITIES
Speakers: Jasmine Akers, Pine Ridge Project Lead, Colorado State University’s Chapter for Engineers Without Borders; Clare Haas Claveau, P.E., Community Engineering Corps Program Director, Engineers without Boarders USA; Glenn Gilbert, P.E., Owner/Principal Engineer, Gilbert Structural Engineering; Cheyenne U. Maio-Silva, Pine Ridge Project Lead, Colorado State University’s Chapter for Engineers Without Borders

NMD | Capitol 4
MITIGATING EXPANSIVE SOILS IN RESIDENTIAL CONSTRUCTION

PD | Mineral B-C
PUBLIC SPEAKING, PRESENTATION AND COMMUNICATION SKILLS NEEDED FOR SUCCESS
Speakers: Yazdan Emrani, M.S., P.E., Q.S.D., Director of Public Works/City Engineer, City of San Fernando; Kenneth H. Rosenfield, P.E., FASCE, Assistant City Manager/Public Services Director, City of Laguna Hills, CA; Sheila Ackerman Shockey, MPA, President, Shockey Consulting Services

SI | Capitol 5-7
ADVANCING EDUCATIONAL AND PROFESSIONAL STANDARDS FOR CES
Speakers: Horst G. Brandes, Ph.D., P.E., FASCE, Professor, University of Hawaii; David B. Peterson, P.E., FASCE, Senior Manager, Structures, RK&K

NMD | Mineral B-C
RESILIENCY: AN INTEGRAL PART OF PROJECTS
Speakers: Warren Edwards, Sr.Fellow, CARRI, Dist. Sr.Fellow, Global Resilience Institute, Northeastern University; Vilas S. Mujumdar, D.P.A., P.E., S.E., FSEI, Dist.M.ASCE, Consultant; Keith A. Porter, P.E., Ph.D., Research Professor, University of Colorado Boulder; Sri Sritharan, Wilkinson Chair of Engineering and Professor of Civil Engineering, Iowa State University

Distinguished Lecture Series | Mineral D-E
BETHANY EISENBERG

ASCE Presents | Mineral D-E
ASCE PRESENTS: THE GREATEST SHOW ON EARTH! THE OCEA’S
Speakers: Greg Banks; Richard Giffen; Trevor Lightly; Anil Parikh

CONCURRENT SESSIONS V
1:00 – 2:00 p.m.
PDHs: 1.0

MDT | Capitol 5-7
DESIGN, CONSTRUCTION AND PERFORMANCE DOE SOLAR DECATHLON
Speakers: Nasko Balakchiev, Graduate Student, UNLV; Adam Betemedhin, Undergraduate Student, UNLV Center for Energy Research; Alexia H. Chen, AIA, Architect, LGA, Inc.; David E. James, Ph.D., P.E., Associate Professor, UNLV Civil & Environ Engr & Constr

PD | Mineral F-G
TOOLS ENSURING EFFECTIVE PREPARATION / TESTIMONY AS AN ENGINEER
Speakers: Nicholas Albergo, P.E., MSCE, DEE, Senior Engineer, GHD

SP | Capitol 4
PROJECT NEON: NEVADA’S LARGEST PUBLIC WORKS PROJECT
Speakers: Debi Bohnet, Project Neon Community Liaison, CH2M; Dale Keller, P.E., Assistant Chief of Project Management, Nevada Department of Transportation

SI | Capitol 1-3
ADVANCING EDUCATIONAL AND PROFESSIONAL STANDARDS FOR CES
Speakers: Horst G. Brandes, Ph.D., P.E., FASCE, Professor, University of Hawaii; David B. Peterson, P.E., FASCE, Senior Manager, Structures, RK&K

NMD | Mineral B-C
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Distinguished Lecture Series | Mineral D-E
BETHANY EISENBERG
INDUSTRY LEADERS FORUM
FROM DISASTERS TO SOLUTIONS
2:15 – 3:45 p.m. | Centennial E-H
PDHs: 1.5

Civil Engineers are increasingly asked by clients to design projects and facilities that are resilient and sustainable and account for future climate change.

During this year’s Industry Leaders Forum at the ASCE Convention, Chris Stone, P.E., F.NSPE, F.ASCE, LEED AP, CEO, ClarkNexsen, will discuss with an expert panel how he and other engineers can respond to clients who are interested in building the right project the right way.

Moderator:
Terry Neimeyer, P.E., F.ASCE, ASCEC, BCEE, ExecENG, ENV SP, CEO and Chairman of the Board, KCI

Panelists:
Alice Hill, Research Fellow, Hoover Institute whose work has included policy issues related to resilient and the impacts on climate change.

Bilal Ayyub, Ph.D., P.E., F.ASCE, Professor and Director, University of Maryland, Editor Recently released ASCE Publication MOP 140, Climate – Resilient Infrastructure; Adaptive Design Risk Management

Kathleen D. White, Ph.D., P.E., Lead, Climate Preparedness and Resilience Community of Practice, Lead, CW Guidance Program, US Army Corps of Engineers Headquarters

Jim Starace, P.E., Chief Engineer, The Port Authority of NY & NJ

The forum will also provide the audience the opportunity to provide questions to the panel.

Learning Objectives:
• A better understanding of how to respond to clients’ needs for life cycle of their projects
• How to use the recently released ASCE Publication MOP 140
• The current state of research in climate adaptation for infrastructure
CONCURRENT SESSIONS VI

4:15 – 5:15 p.m.
PDHs: 1.0

HH | Mineral D-E
BUILDING THE TRANSCONTINENTAL RAILROADS AND BRIDGES NAMED AFTER ENGINEERS
Moderator: Bernie Dennis, Jr., M.ASCE, U.S. Department of State
Speakers: Alfred Ring Mangus, P.E., M.ASCE, Transportation Engineer, Civil, PEGC - Professional Engineers in California Government; Chuck Spinks, P.E., M.ASCE, Vice President, Kimley-Horn and Associates

NMD | Capitol 1-3
ENGINEERING CLIMATE ADAPTATION TO CARIBBEAN HURRICANES
Speakers: Kevin Bruce Hagen, P.E., Project Manager, Engineers Without Borders-USA; Michael William Paddock, P.E., PS, Senior Engineer, Engineers Without Borders-USA; Luca Renda

SP | Capitol 4
5 MILE, $750M BELT PARKWAY PROJECT, BROOKLYN, NY
Speakers: Paul Dombrowski, P.E., Chief Resident Engineer, AECOM; William G. Ferdinandsen, P.E., Program Manager, Greenman Pedersen Inc.; Daniel Hom, P.E., Engineer In Charge, New York City Department of Transportation; Jessica Wang, P.E., Project Engineer, New York City Department of Transportation

Younger Member Session | Mineral F-G
YOUNGER MEMBER SPOTLIGHT
Speakers: Nick Eggen; Seth Martin; Reza Sheykhi, A.M.ASCE, Assistant Strategy Manager, Office of the Provost, EVP and COO, Florida International University (FIU); Joanna Smith, M.Eng, M.ASCE, Geotechnical Engineer II, AECOM

STI | Capitol 5-7
DESIGNING CORPORATE SOCIAL IMPACT TO ENGAGE AND GROWN
Speakers: Peter C. Atherton, P.E., President, ActionsProve, LLC

SI | Mineral B-C
MITIGATION SAVES: BENEFIT - COST ANALYSIS OF EXCEEDING I CODE
Speakers: Keith A. Porter, P.E., Ph.D., Research Professor, University of Colorado Boulder

CONVENTION DAILY SURVEY
An electronic evaluation questionnaire will be sent to all attendees. All who participate in this evaluation will be eligible for a convention giveaway.
Optional tours will depart from the 15th Street Hyatt Regency Denver at the Colorado Convention Center Lobby to take you to your destination. Please plan to arrive 15 minutes early, as buses will leave on time. ASCE cannot be held accountable or have the ability to provide transportation if you miss the departure time. Tours are available on a first-come, first-serve basis and have limited capacity. A separate registration fee is required to offset the costs involved with the tours. ASCE reserves the right to cancel a tour if the minimum registration is not met. Tour times are subject to change. Please check with the registration desk if you have any questions.

BANJO BILLY GHOST TOUR

6:00 – 9:00 p.m.

Some really wild things have happened here in the Mile High City. Take a ride through downtown Denver and find out about these scary stories on this ghost tour including a ride by one of the most haunted houses in Colorado, the Denver Firefighters Museum, and Cheeseman Park. Answer some spooky trivia questions along the way.

Top Right: The Denver Firefighters Museum, also Denver’s Fire Station No. 1. Photo credit: Jeffrey Beall
Middle Right: Cheeseman Park, via Wikipedia
Bottom: Banjo Billy Ghost Tour bus
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<tr>
<td>7:30 a.m. – 12:00 p.m.</td>
<td>Registration</td>
<td>Centennial Foyer</td>
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<td>7:30 a.m. – 12:00 p.m.</td>
<td>Communities &amp; Pavilion</td>
<td>Centennial Foyer</td>
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<td>8:00 – 9:30 a.m.</td>
<td><strong>Concurrent Sessions VII</strong></td>
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<td><strong>MDT:</strong> Raising the GPA: Tackling Aging Pipelines</td>
<td>Capitol 1</td>
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<td><strong>NMD:</strong> Resiliency in the Built Environment</td>
<td>Agate A-C</td>
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<td><strong>PD:</strong> Keys to Success in Public Works and Project Delivery</td>
<td>Mineral F-G</td>
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<td><strong>SI:</strong> What’s up in Washington? Infrastructure Legislation</td>
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<td><strong>STI:</strong> Building a Smart City</td>
<td>Capitol 4</td>
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<td><strong>SI:</strong> Preparing for Professional Practice: Civil Engineering and Other Professions</td>
<td>Mineral D-E</td>
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<td>9:45 – 11:15 a.m.</td>
<td><strong>Concurrent Sessions VIII</strong></td>
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<td><strong>MDT:</strong> We Won the Bid: Managing Litigation Risk</td>
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<td><strong>NMD:</strong> JSCE-ASCE International Research on Infrastructure Resilience</td>
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<td><strong>PD:</strong> Leadership Today: Building Your Path and Your Personal Brand</td>
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<td><strong>SP:</strong> Leveraging City Assets with Green Infrastructure</td>
<td>Mineral F-G</td>
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<td><strong>SI:</strong> Perspectives on the Public-Private Partnership Financing Model</td>
<td>Agate A-C</td>
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<td><strong>STI:</strong> Collaboration Model Between Practicing Professionals and University</td>
<td>Mineral B-C</td>
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<tr>
<td>11:30 a.m. – 1:30 p.m.</td>
<td><strong>Closing General Session &amp; Luncheon</strong></td>
<td>Centennial A-D</td>
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**Convention Topics:**

- **HH** – History & Heritage
- **MDT** – Multidiscipline Technical
- **NMD** – Natural & Man-Made Disasters
- **PD** – Professional Development
- **SI** – Strategic Issues / Public Policy
- **STI** – State of the Industry / Profession

> **Communities & Pavilion** will be closing at 12:00 p.m., so please pick up any purchases prior to closing.
Closing General Session and Luncheon
11:30 a.m. – 1:30 p.m. | Centennial A-D

Speaker
Kristina L. Swallow, P.E., ENV SP, F.ASCE
2018 ASCE President

Keynote Address:
Get What You Want with What You’ve Got!

Speaker: Christine Cashen

We are all being asked to do more with less. Join Christine in her worldwide campaign to “Stop Global Whining.” You have what it takes right now to make a difference. This interactive program gives you the tools to get the absolute best with what you’ve got! After this program you will:
• enhance communication to build relationships/teams;
• discover quick and easy tips to have more energy; and
• get practical and creative strategies for having less stress and more fun in all areas of your life.

Join Christine to laugh and learn as she shows you the way. You can get what you want both personally and professionally!

Presented in part by an educational grant brought to you by the ASCE Foundation
CONCURRENT SESSIONS VII
8:00 – 9:30 a.m.
PDHs: 1.5

MDT | Capitol 1
RAISING THE GPA: TACKLING AGING PIPELINES
Speakers: Greg Fick, Principal Civil Engineer, WSSC; Sean J. Lammerts, P.E., LEED AP, Engineer, US Pipe and Foundry; Heather Himmelberger, MEng, P.E., Director of Southwest Environmental Finance Center, University of New Mexico; Mike Jacobson, P.E., M.ASCE, PMP, Senior Project Manager, Pure Technologies; Jorge Rodriguez, P.E., Program Manager, Pure Technologies; Mike Woodcock, Principal Civil Engineer, WSSC.

NMD | Agate A-C
RESILIENCY IN THE BUILT ENVIRONMENT
Speakers: Craig A. Davis, Ph.D., P.E., GE, M.ASCE, Resilience Program Manager, Los Angeles Dept of Water and Power; Mika Marsh, EIT, Project Engineer, Ashley & Vance Engineering; Jill Nelson, SE, CVS, LEED AP BD+C, Associate Professor, California Polytechnic State University SLO.

PD | Mineral F-G
KEYS TO SUCCESS IN PUBLIC WORKS AND PROJECT DELIVERY
Speakers: John T. Davis, P.E., PSM, F.ASCE, Retired, Local, Regional and State Public Works Agencies.

SI | Mineral B-C
WHAT’S UP WASHINGTON? INFRASTRUCTURE LEGISLATION UPDATE
Speakers: Carol E. Haddock, P.E., M.ASCE, Director, Houston Public Works; Brian Pallasch, CAE, Managing Director, Government Relations & Infrastructure Initiatives, American Society of Civil Engineers.

SI | Capitol 4
BUILDING A SMART CITY
Speakers: Michael E. Beehler, P.E., F.ASCE, Vice President, Burns & McDonnell.

SI | Mineral D-E
PREPARING FOR PROFESSIONAL PRACTICE: CIVIL ENGINEERING AND OTHER PROFESSIONS
Speakers: Kelly Dooley, P.E., M.ASCE, Director, Raise the Bar, ASCE; Eric L. Flicker, P.E., M.ASCE, Senior Consultant, Pennoni; Luke Hagedorn; Amanda Jamison, MBA, CPA, Senior Accountant, EverCommerce; Elizabeth Martin, Ph.D.
CONCURRENT SESSIONS VIII

9:45 – 11:15 a.m.
PDHs: 1.5

MDT | Capitol 1
WE WON THE BID: MANAGING LITIGATION RISK
Speakers: Frederick W. Mohre, J.D., Partner, Pearson Bitman LLP; Karl E. Pearson, J.D., Managing Partner, Pearson Bitman LLP

NMD | Capitol 4
JSCE-ASCE INTERNATIONAL RESEARCH ON INFRASTRUCTURE RESILIENCE
Moderators: Onishi Masamitsu; John van de Lindt, Ph.D., F. ASCE, George T. Abell Distinguished Professor, Colorado State University
Speakers: Bilal Ayyub, Ph.D., P.E., Professor and Director, Center for Technology and Systems Management, Department of Civil & Environmental Engineering, University of Maryland, College Park; Craig A. Davis, Ph.D., P.E., GE, M.ASCE, Resilience Program Manager, Los Angeles Dept Of Water and Power; Kiyoshi Kobayashi; Sue McNeil, Ph.D., Professor/Department Chair, University of Delaware; Yoshikazu Takahashi

PD | Mineral D-E
LEADERSHIP TODAY: BUILDING YOUR PATH AND YOUR PERSONAL BRAND
Speakers: Marlo Abramowitz, P.E., ENV SP, M.ASCE, Transportation Engineer, HDR; Robert L. Cagle, III, P.E., FASCE, Retired, US Army Corps of Engineers; Marsie Geldert-Murphy, P.E., FASCE, Chief Operating Officer, Jim Taylor Inc.; Robert P. Wadell, P.E., MSCE, FASCE, President/CEO, Wadell Engineering Corporation; Ronald W. Welch, Ph.D., P.FASCE, COL (US Army Retired), Dean of Engineering, The Citadel

SP | Mineral F-G
LEVERAGING CITY ASSETS WITH GREEN INFRASTRUCTURE
Speakers: Andrew Beck, P.E., CFM, Deputy Director, Water Resources, Matrix Design Group; Greg Ciecik, Senior Landscape Architect, City and County of Denver; Leslie Fangman, Director of P3 Infrastructure, Saunders Construction, Inc.; Sam Stevens, P.E., Engineering Supervisor - CPM, Public Works, City and County of Denver

SI | Agate A-C
PERSPECTIVES ON THE PUBLIC-PRIVATE PARTNERSHIP FINANCING MODEL
Speakers: Matt Girard, Group Head, Civil Division, Plenary Group; Ed Mortimer, Executive Director, Transportation Infrastructure, United States Chamber of Commerce; Adam Ortiz; Kevin Pula, Senior Policy Specialist, National Conference of State Legislatures; David Spector, Director, Colorado High Performance Transportation Enterprise; Lisa Stabler, President, Transportation Technology Center, Inc

STI | Mineral A-C
COLLABORATION MODEL BETWEEN PRACTICING PROFESSIONALS AND UNIVERSITY
Speakers: C. Stephen Bucknam, Jr., P.E., FASCE, President, Bucknam and Associates, Inc.; T. Ted Miyake, P.E., M.ASCE, Principal, NMG Geotechnical, Inc.; Joel Lanning, Ph.D., P.E., M.ASCE, Assistant Teaching Professor, University of California, Irvine

CONVENTION DAILY SURVEY
Convention surveys are located on the mobile app under each session. Please fill them out and give us feedback to help make the convention better.
Want to be part of this outstanding program in 2019? The Call for Presentations is open. Submit your proposal today!

#ASCE19 | www.2019.asceconvention.org
Your Foundation, Your Future.

Can you imagine if there was no Concrete Canoe Competition, ExCEEd or Dream Big film?

Make a gift of $5,000, today, to join the ASCE Foundation’s JLVC Giving Society—to ensure that doesn’t happen.

Visit the ASCE Foundation in the communities and pavilions to make your gift today.
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ASCE 2018 CONVENTION SPONSORS!

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STV 100 Years