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### Upcoming Meetings:

- **SAME-MSP Meeting, Wed. April 25th**
- **SADBOC, Thurs. April 26th**
- **SAME JETC, May 23rd – 25th, Kansas City, MO**
- **SAME-MSP Meeting, Wed. May 23rd**

### Frequently Used Links:

- National website at [www.same.org](http://www.same.org)
- Post website at [www.same-msp.org](http://www.same-msp.org)
- Listing of [Post Leaders](#)
- Listing of [Post Sustaining Members](#)
- [SAME-MSP Facebook Page](#)

### Next Meeting Presentation

Wednesday, March 28th, 2018

## Transportation Technology:

### The Gateway to our Future Transportation System

**Bernard Arseneau, PE, PTOE, HDR Highways Market Sector Director**

1 PDH

### Speaker Bio:

As HDR's Highways and Roads Director, Bernie Arseneau leads the provision of services for HDR's highways clients in the US, Canada and Australia. Prior to joining HDR, Bernie spent 30 years with the Minnesota Department of Transportation (MnDOT) in a variety of leadership roles. His commitment to highway safety and innovative planning saw a sea change in the department's transportation program. Ideas he pioneered there have been implemented on a wide scale today. Bernie's insightful analyses of policy and design continue to influence the industry, particularly in articles he has co-authored on trends such as managed lanes, intelligent transportation systems and autonomous and connected vehicles.

### Presentation Synopsis:

Transportation technology is setting the stage for a revolution in transportation within the next decade. As a disruptive event, transportation technology is rapidly changing long established paradigms regarding how people and goods move from point A to point B. At the same time, like most technology-based disruptive events, transportation technology is evolving and emerging rapidly making it challenging for transportation planners, engineers, and system managers to determine a path forward avoiding one-time technology blips while investing in those technologies that have longevity and will stand the test of time. This presentation will help attendee's begin to understand the incredible change that is at the doorstep of all modes of our transportation system and provide examples of approaches, such as future-proofing and technology road maps, that we must explore as we plan for and design today's transportation projects.

### Meeting Location:

**LOCATION: Grumpy's Bar and Grill, 2801 Snelling Avenue, Roseville, MN 55113**

*Free parking is available adjacent to the restaurant.*

### Agenda:

Social time and lunch (if you so desire) will be available from 11:30 AM to 12:30 PM with presentation from 12:30 PM to 1:30 PM.

A lunch at a cost of \$20 will be available. Lunch will consist of a pasta buffet and includes Caesar salad, garlic bread, and a beverage. Please RSVP no later **than Wednesday, March 21st, 2018**, with your intent to either partake in the lunch or to come for the presentation only. Please click the RSVP button in the left-hand column of page 1 or use the following Eventbrite link to RSVP: <https://www.eventbrite.com/e/march-professional-development-meeting-tickets-43860185997>

**Have an idea for future meeting topics or tours?**

**Please contact Matt Redington with your ideas at [matthew.redington@hdrinc.com](mailto:matthew.redington@hdrinc.com) or 763-591-5487!**

## Highlights of the February Meeting



Garrett Blomstrand is a licensed professional engineer that has worked for the U.S. Army Corps of Engineers Saint Paul District in the Water Management and Hydrology section since 2012. He specializes in hydrologic engineering with interests in hydrologic modeling, statistical hydrology, and climate change impacts to inland hydrology. Garrett presented on Bulletin 17C, a document and methodology used to estimate peak flow rates for waterways based on river gage and other historic data.

Accurate estimates of flood frequency and magnitude are critical for floodplain mapping, engineering design, and watershed planning. Methods for estimating flood risk must be uniformly and consistently applied because management of the Nation's water and related land resources is a collaborative effort involving multiple stakeholders. The basis for generating flow -frequency guidelines was initially established within Bulletin 15 in 1967. This document was revised several times, including the currently adopted Bulletin 17B: Guidelines for Determining Flood Flow Frequency (1982). In 2013 the Hydrologic Frequency Analysis Work Group drafted a revision to Bulletin 17B called Bulletin 17C. Garrett's presentation discuss the changes that are being incorporated into 17C which include:

- Reduced uncertainty (tighter confidence intervals)

- Better screening of low flow outliers
- More accurate prediction of flow rates for extreme events
- Maintenance of variance extension methodology allows for adjustments if data sets have a short period of record
- Historic data can be incorporated through setting of perception thresholds
- Use of improved skew coefficients (as published through USGS)

The Bulletin 17C methodologies are available for use, but the official documentation release date has not been announced.

### February Sustaining Member Recap: Stanley Consultants

For more than 75 years, Stanley Consultants has served U.S. federal military and civilian government agencies in support of military realignments, contingency operations, disaster and post-war reconstruction and humanitarian efforts. Stanley provides trusted support around the globe, serving as an extension of the U.S. federal government.

Stanley's work includes engagements with the U.S. Air Force, U.S. Navy, U.S. Army, U.S. Army Corps of Engineers, U.S. Department of Agriculture, U.S. Department of Fish & Wildlife Services, U.S. Department of Homeland Security, including FEMA, U.S. General Services Administration, U.S. Department of Energy, U.S. Department of Veteran Affairs, U.S. Geological Services and Bureau of Indian Affairs. Stanley offers scalable resources and manpower for quick mobilization through our global network of nearly 1,000 employees and 35 offices worldwide.

Stanley is recognized globally for their expertise in flood and hurricane resiliency, including extensive flood management projects along the Mississippi River and its tributaries stretching from St. Paul to New Orleans and restoration of 400 miles of flood protection following Hurricane Katrina. They bring broad project, climate and cultural experience working with the U.S. Army Corps of Engineers for over 40 years, including 37 of its 45 districts worldwide.

Their mission is to sustain operations by providing forward-thinking solutions in asset management, master planning, energy and flood resiliency, clean water supply, energy efficient and sustainable facilities and infrastructure, air, land and water mobility and physical and cyber security.

### 2017 STEM Education Grant Recipient



Students at Sonnesyn Elementary have had a great time exploring and creating new virtual experiences with the technology purchased with the SAME Education grant. They have explored Pakistan through the eyes of touring musicians and female anti-terror squads with the help of VR video documentaries. They have also explored places like the ocean floor and historic Boston. (See attached photo) Using the iPads purchased they are

recording timelapse events like growing plants. A focus of their engineering/design work has been to create and explore VR architecture. The Sonnesyn art teachers have helped introduce basic architecture concepts like symmetry and usability as well as architectural design from cultures all over the world, including mosques, Roman palaces, and western design. The students take their creations from art class and transform them into 3d sculptures using sketchfab, learning about the digital tools as well as how their buildings present in 3D. Currently the students are working to share and import their designs to create VR neighborhoods filled with fantastical designs from all of the 4th grade classes. (See sample below). As a final step, the students will assess their buildings in VR and make needed changes to assure their designs are structurally sound enough to be 3D printed and taken home.



### Small Business Corner

Mark your calendar for the SADBOC small business conference on April 26th at the Earle Brown Heritage Center from 9 am to 3 pm. Vendor booths and lectures continue to give many small businesses, government, and large businesses the chance to discuss upcoming opportunities and ways to better connect to do business.

## SAME-MSP Members Recognized at MFESTS Awards Banquet



Lindsey Roberts McKenzie was nominated by our Post and selected as the Young Engineer of the Year by the Minnesota Federation of Engineering, Science, and Technology Societies (MFESTS) on February 24, 2018, at the annual E-Week Awards Banquet and Celebration. Mark Angelo was nominated as the SAME Minneapolis-St. Paul Post Distinguished Engineer of the Year and recognized at the E-Week banquet as well. Congratulations to Lindsey and Mark!

## SAME Credentialing Achievement Awards Program (CAAP)

In an effort to support SAME Young Members and Enlisted obtain credentials that strengthen their professionalism, SAME has developed the Credentialing Achievement Awards Program (CAAP). The program is intended to help fund exam sitting or registration fees for credentials, certifications or licensures deemed to have intrinsic value to SAME's mission and the architectural and engineering professions. To find out more, including how to apply for this program, visit the SAME Career Development Center website, and select the "Credentialing Achievement Awards Program tab at the right. <http://www.same.org/Career-Development-Center>

## Sustaining Member Presentations at Future SAME-MSP Post Meetings

The SAME MSP Post is looking for our sustaining members to give a brief 5 minute presentation about your company prior to the monthly presentations. This is a great networking opportunity to tell others about your company's services, small business information, etc. We currently have openings, see schedule below. Please email Sherry Van Duyn at [svanduy@landmarkenv.com](mailto:svanduy@landmarkenv.com) or Dave Ausdemore at [dave@hsscience.com](mailto:dave@hsscience.com) with which month you would like to present.

<b>Month</b>	<b>Speaker</b>
April	Stantec
June	EFN Survey
September	Open
October	Open

## Save the Date: 2nd Annual MSP Post Industry Day & 33rd Annual Golf Tournament

**When:** Friday, July 20, 2018

**Where:** Oak Marsh Golf Course in Oakdale, MN

**Schedule:** Industry Day in the morning, followed by lunch, golfing in the afternoon, and awards/dinner after golf

**Why:** Earn PDHs, Network, and Have Fun! More info to come in upcoming newsletters.

## SAME Educational Grant for Math and Science Grades K-12

The Society of American Military Engineers (SAME) is offering educational grants for up to \$3,000.00 for elementary and secondary schools for the upcoming 2018-2019 school year for schools in the thirteen-county metro area. One fundamental goal of SAME is... *To promote an understanding of, and appreciation for, the engineering related disciplines and to help the young people in our communities be better prepared to become our future engineers...* SAME-MSP is requesting applications from schools and classroom teachers who are committed in supporting the math and sciences that support future engineering-related career opportunities. We are encouraging all grade levels to participate.

Applications for these grants will be reviewed on the following criteria:

- Creativity and quality of proposed project
- Demonstrated demand or need for the project
- Support of the Minnesota or Wisconsin math and/or science academic standards

The deadline for the educational grant is **April 6, 2018**. At the completion of the 2018-2019 academic year members of SAME would like to learn from the students on what they learned as a result of the grant. Elementary and secondary teachers / schools that are promoting the math and sciences in the thirteen county metro areas are encouraged to apply. For more information, please go to <http://same-msp.org/grants-and-scholarships/>

## SAME-MSP Post Scholarship Applications Available

The 2018 Scholarship Application Forms are now available on the [Grants & Scholarships](#) page of the web site, as well as via the links below. It is anticipated that there will again be **up to three \$1,500** scholarships available. The deadline for submitting scholarship applications is **Friday, April 6<sup>th</sup>, 2018**.

If you know someone who is deserving of a scholarship, please urge the young person to apply for one of the Post's scholarships. Applicants are rated in a number of areas including academics, school activities, and community activities. High school seniors and Post-secondary students are eligible if they are either:

- Children, grandchildren, or siblings, of members of the Minneapolis-Saint Paul Post. Sponsoring members must be a SAME Minneapolis-Saint Paul Post member for the current year and have been a member of the Post for a minimum of at least one year prior to the current year.
- Student Members of the SAME Minneapolis-Saint Paul Post who will be registered as full-time post-secondary students in the fall of the year of selection. Applicants under this category must be registered through SAME as a Student Member; student memberships are free for full-time undergraduates at an accredited college or university, or high school students.

Applicants must be registered as full-time post-secondary students in the fall of the year of selection and be majoring in an accredited engineering, science, math, or technology-related field and/or disciplines that will specifically support these fields of study.

A committee of Post members evaluates the applications. All applications are kept confidential, and only the winners are announced. For additional information, please contact [Erin Krug](#) at [Erin.E.Krug@usace.army.mil](mailto:Erin.E.Krug@usace.army.mil) or 651.290.5576. Scholarship Application Packages can be downloaded from the Post's website at: <http://same-msp.org/grants-and-scholarships/>

[www.same-msp.org](http://www.same-msp.org)