

September Section Meeting

Improving Operating Expenses at WMATA through Maintenance Optimization

Transit organizations are faced with increasing focus on operating expenses. They are challenged with diminishing revenues as employers move increasingly towards a remote working model reducing the demand for transit, while municipalities require their transit systems to service an ever-growing area to meet equity demands. Transit providers have a need to become lean, focusing on initiatives to contain operating expenses in order to meet the gaps created by reduced ridership revenue.

This presentation will focus on a use case with the Washington Metropolitan Area Transit Authority (WMATA), leveraging unique techniques to identify and implement initiatives that result in near term operating expense savings through optimization of maintenance activities. Learn about AM2O – Asset Maintenance Optimization Model, the process used to identify opportunities for maintenance efficiencies, and some specific successful use cases within WMATA to identify and implement efficiencies through the use of the AM2O methodology.

About the Speaker

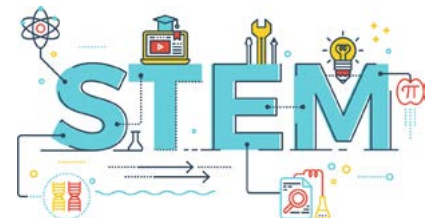
Mr. Doug Stevenson is a Vice President in WSP USA's Advisory Services, and provides services and solutions for complex asset intensive industries. He has more than 25 years of experience working in engineering and maintenance organizations, leading transformational engagements across all levels of an organization. Mr. Stevenson works predominantly in the transit industry assessing, developing, and implementing cross-discipline processes and solutions working directly with transit and rail organizations including the Washington Metropolitan Area Transit Authority (WMATA); Long Island Railroad (LIRR); Massachusetts Bay Transportation Authority (MBTA), Keolis Commuter Services, Port Authority of Allegheny County (PAAC), Denver Regional Transportation District (RTD), Maryland Transit Administration (MTA), Bombardier Transportation and others. ■



Please join us virtually on **Thursday, September 29th** from 12:00 pm to 1:00 pm for a modified ASCE National Capital Section September Lunch Meeting! The program will approximately consist of a one hour presentation with a webinar format and one (1) PDH credit will be awarded. The cost will be \$5 for all members, non-members, and students. For questions, please contact president@asce-ncs.org. Please [click here](#) to register by **Wednesday, September 28th**.

AAAS STEM Volunteers Program

The AAAS STEM Volunteers Program, stemvolunteers.org, needs STEM professionals to assist K-12 STEM (Science, Technology, Engineering, Mathematics) teachers in the DC metro area during the 2022–23 school year. Our school districts are Montgomery County, DC, Arlington, Alexandria, and Fairfax County.



All lessons will be in the classroom, and it is anticipated that masks and testing will be optional.

If you care about K-12 STEM education and have time to share your knowledge with students and teachers, please send a note to bcalinge@aaas.org with your home address. ■



President's Corner

Thank you, members of ASCE NCS, for entrusting me to lead the National Capital Section for the 2021–2022 year. I would like to thank the entire Board of Directors; Branch/Committee/Forum/Institute Chairs and Members; and Meeting Champions who organized learning opportunities for the Section. Thank you to our Silver Sponsors at WSP USA and SGH. *I would also like to thank all ASCE NCS Section Members, volunteers, and participants who have engaged in activities.* The time taken to show your support is what keeps the Section thriving, for over a century now. I am proud to join the long line of Past Presidents and am excited to pass the torch to Ms. Elizabeth M. Wheeler, P.E., our incoming President.

I would also like to thank speakers who shared their knowledge when called upon to provide professional development opportunities for our Section since last September.



Together we learned about the Alexandria Transit Company (DASH) Zero Emission Bus (ZEB) Implementation Plan with Raymond Mui (Alexandria Transit Company, DASH) and Severin Skolrud (WSP USA); the Frederick Douglass Memorial Bridge Project Overview with

Dennis Howland, II, P.E. (DDOT) and Jon Whitney, P.E., (HNTB); the Future of Flood Risk Data Overview with Luis V. Rodriguez, P.E (FEMA); the WMATA Silver Line – Phase 2 with Stephen Barna, P.E., M.ASCE (MWA); the Sierra Leone Dumangbe Bridge Project with Jamel El-Hamri, Evan Perreault, and Nicole Regobert (EWB-DC) by way of Life Members Forum Chair Phillip L. Melville and Member Sheila Duwadi; Reagan National Airport Project Journey with Kyle Johnson, CMIT (MWA); and a panel on Art in Transit and Public Space with Jessie Himmelrich (SWBID), Laurent Odde, Ph.D. (WMATA), Gary Witherspoon (MDOT MTA), and Larry Moritz RA,

LEED AP (Maryland Transit Partners). We were even able to find the silver lining in a virtual environment by connecting with a dynamic speaker beyond the Section boundaries. Dawn Lehman, Ph.D. of the University of Washington joined our Section meeting to share significant findings for the Initial Investigation into the Partial Collapse of the Champlain Towers South (CTS) Building in Surfside Florida.

There are so many moments and events to reminisce about. In the winter, the Younger Member Forum organized a fun Gingerbread Building Activity. There were also outreach opportunities available through the Future City Competition, one of the great programs that ASCE supports. (The imaginative ideas and videos submitted by young students really made an impression on me!) During the spring, ASCE also hosted the annual Legislative Fly-In. Martino Scialpi, PMP, CCM and I represented ASCE NCS and had the privilege to discuss local infrastructure with the Honorable Eleanor Holmes Norton. I encourage all members to apply to take part in this program in 2023.

As the weather warmed up, the Section hosted the 2022 ASCE NCS Annual Awards Celebration on the campus of The Catholic University of America through much assistance from Professor Jason Davison and Mr. Jacques Moore, Director, Office of Events and Conference Services. The event also included a livestream. At the event, ASCE NCS awarded scholarships to deserving students and celebrated outstanding projects and professionals. Federal Transit Administration (FTA) Administrator

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Jameelah riding off into the sunset

Newsletter

Maria Raggousis, Editor

November 2022 Issue Deadline: October 14, 2022

To Submit Articles: newsletter@asce-ncs.org

NCS eNewsletter Archives: go to www.asce-ncs.org and view along the sidebar.

Address Changes: Call 1-800-548-ASCE, e-mail member@asce.org, visit www.asce.org, or write: ASCE – Membership, 1801 Alexander Bell Drive, Reston, VA 20191. Include your membership number.

National Capital Section

Officers (2021–2022)

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Christopher Friend, Reston Branch
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Committee Chairs

Please refer to the [NCS website](http://www.asce-ncs.org) for a current list of NCS committees and chairs.

President's Corner

Nuria I. Fernandez made the time to give an inspiring keynote speech.

This was also the year of the ASCE Virginia Section's Centennial Celebration. The events and tools developed for the celebration were a true model for NCS and other Sections. Throughout the year, ASCE NCS Committees, Branch, and Institute leaders continue to organize and plan. Just this August, I attended a session hosted by ASCE NCS History and Heritage Chair, Bernie Dennis, Jr., where we learned about the Old

Naval Observatory. He has been organizing and teaching fascinating topics throughout the summer. There is so much history in the District of Columbia, Maryland, and Virginia area.

In our June newsletter, my message mentioned adventure. I took a few road trips with my husband Jesse this summer and witnessed the beauty of our civil engineering works across the United States. Thank you to the American Society of Civil Engineers for promoting a profession that makes these adventures possible. Today,

we, as the American Society of Civil Engineers, are creating history for future generations through our daily work. In that spirit, let's give back, give grace, and continue to give our all. Thank you and hope to see you again soon!

Sincerely,



Jameelah C. Muhammad Ingram,
P.E., M. ASCE
ASCE NCS President

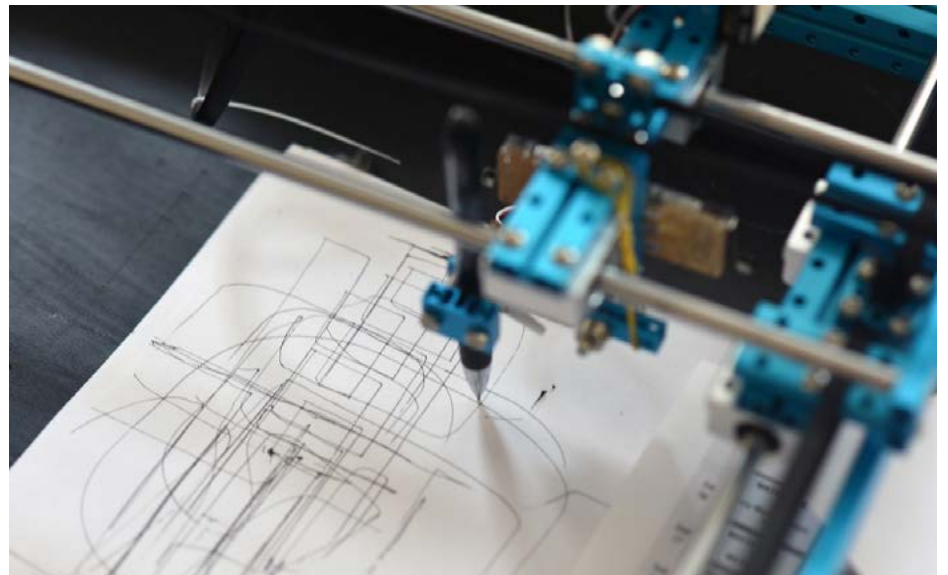
CUA School of Engineering Wins Major Grant to Engage Underrepresented High School Students in STEM Education

The [Catholic University of America's School of Engineering](#) has been awarded a \$750,000, three-year grant from the Office of Naval Research (ONR) to encourage equity in STEM (science, technology, engineering and math) education through programs for high school students from underrepresented groups, including racial and ethnic minorities, students from low-income families, and women.

The funding will provide programs for 2,500 students from the Washington, D.C. metropolitan region. The [Research and Innovative STEM Education \(RAISE\) program](#) also will fund successful basic and applied research in support of ONR.

"We are very pleased to have earned this grant, which is aligned with implementation of the Sister Thea Bowman Committee recommendation to provide funding to support faculty research and teaching on topics pertinent to the work of the Committee," said Mel Williams, associate dean of engineering and special assistant to the president for diversity. The [Bowman Committee](#) was formed to address and strengthen diversity at Catholic University.

Jason Davison, assistant professor of civil and environmental engineering and principal investigator for the RAISE initiative, said the grant will support



research on wireless power transfer and additive manufacturing, scholarships to a [week-long summer immersion program](#) held annually on campus at Catholic University, and two evening educational programs.

The single session programs, starting in fall 2022, will focus on hands-on tutorials using 3D printers, and working with engineering faculty, graduates and local professionals. The four-week, four-session cyber security workshops, also taught by faculty and professionals, will engage participants in programming. All events will be held in the School of Engineering's new STEM makerspace, which is near the Brookland metro stop.

RAISE is the engineering school's first grant that involves the interdisciplinary effort by six disciplines – electrical engineering, computer science, materials science and engineering, mechanical engineering, biomedical engineering, and civil and environmental engineering.

For information on upcoming programs, sign up for the newsletter on the [RAISE website](#). ■

ASCE NCS Committee Volunteering Opportunities and Leadership Roles

In addition to the Board positions, we also have other opportunities to take on leadership roles and become more active with NCS. The following roles are not elected positions. These leadership roles are great opportunities to take a stake in ASCE's local presence and activities.

If you are interested or would like more information, please email nominations@asce-ncs.org or president@asce-ncs.org.

Treasurer-In-Training

The Treasurer-In-Training works with the current Treasurer to learn their responsibilities and role with the intention (but no obligation) of becoming the Treasurer once the current Treasurer's term has ended. The Treasurer shall attend meetings of the Board. The Treasurer shall be responsible for the maintenance and disbursement of all funds. The Treasurer shall prepare reports on the financial condition of the Section monthly or at a frequency requested by the President, and shall maintain the membership roster, authenticating all paid dues with the Society. The Treasurer shall assist in preparation of the Section's annual budget and be responsible for submission of the Section's annual tax return. Each Treasurer shall serve a two (2)-year term; the Treasurer-In-Training shall serve a one (1)-year term during the current Treasurer's second term.



Newsletter Editor-In-Training

The Newsletter Editor-In-Training works with the current Newsletter Editor to learn their responsibilities and role with the intention (but no obligation) of becoming the Newsletter Editor once the current Newsletter Editor's term has ended. The Newsletter Editor is responsible for issuing calls for articles, assembling and editing articles, coordinating publication, and issuance of each newsletter. The Newsletter Editor is considered a Director on the Board. Each Newsletter Editor shall serve a two (2)-year term and is eligible for re-election.

Committees

NCS has over twenty committees. All committees are open to members who are interested in taking a leadership role. Committees include the Architectural Engineering Institute; Annual Awards Banquet Committee; Boundary Stone Committee; By-law Committee; Communications

Committee; Construction Committee; Corporate Relations Committee; Education Committee; Environmental & Water Resources Institute; Engineers Week Committee; Geo-Institute; History and Heritage Committee; Life Members Forum; Management & Best Practices Committee; Newsletter Editor; Report Card Committee; Reston Branch; Section Meeting Planning; Structural Committee; Sustainability Committee; Transportation Committee; Younger Member Forum; and Webmaster.

The Sustainability Committee and Structural Committee are both seeking Chairs. The Communications Committee is seeking a volunteer to assist with social media for the ASCE National Capital Section.

Volunteering

We have opportunities to take on leadership roles and become more active with NCS. We are always looking for volunteers to champion section meetings, participate in STEM events, plan a social event, host a tour, etc.

Appointments

There are opportunities to serve as a Practitioner Advisor at universities within NCS, upon authorization by the Board of Directors and recommendation of the Faculty Advisor. A Practitioner Advisor should support the Faculty Advisor and be an example of high-caliber professional performance to students. Contact nominations@asce-ncs.org for details and requirements. ■

ASCE-NCS Newsletter Patrons



FIFA World Cup Qatar 2022™ Spectacular Stadiums

Soccer is the most popular sport, with an estimated following of 4 billion fans. The World Cup is the most prestigious association soccer tournament, as well as the most widely viewed and followed single sporting event in the world. After years of preparation, the FIFA World Cup Qatar 2022™, one of the most anticipated global events, is finally nearing inauguration. The 22nd edition of the competition will be played from Nov. 20 to Dec. 18, 2022, in Qatar, being the first-ever winter World Cup and the first played in the Middle East. 32 teams will participate, and 64 matches will be played. The knockout phase (Round of 16) will begin on Dec. 3 and the final match will be on Dec. 18, which is also the National Day of the State of Qatar.

Ever since FIFA announced that Qatar will host the 2022 World Cup back in 2010, preparations on a total of 8 stadiums have been in full force, especially due to the critical climate conditions. There is a desert climate with very hot, humid, and sunny summers. In Doha, the capital city of the state of Qatar, the hot season (May to September) has an average daily high temperature above 100°F (38°C). The hottest month is July, with an average high of 106°F (41°C). In summer, the combination of moisture and temperature makes it feel even hotter.

The 8 stadiums are within 35 miles of each other. Increased capacity is needed for the World Cup games, but it will be reduced right after that. Parts of the stadiums will be donated



to developing countries requiring sporting infrastructure, in keeping with the tournament's wider sustainability goals and Qatar's dedication to sustainable development.

1. Al Bayt Stadium

Al Bayt Stadium will be the host of the opening match. Designed by Dar Al-Handasah, located in Egypt, it is shaped like a Bedouin tent, a symbol of hospitality in the desert. Traditionally, the tents are identified by black and white stripes. This is reflected on the arena's distinctive exterior, as are the vibrant sadu patterns that greet fans once inside. Its tent-like appearance comes from the use of polytetrafluoroethylene (PTFE) on its exterior, which covers a structural steel framework. The building is topped by a retractable roof, which can be open or closed as required, to help mitigate excessive heat. The stadium uses green building materials and the latest technology to preserve energy and water and has received a Class A* rating from Global Sustainability Assessment System (GSAS).

2. Lusail Stadium

With a capacity of 80,000, Lusail Stadium will host the final match on



Lusail Stadium

Dec. 18. It is designed by the architectural firm Foster + Partners (UK). The design reflects the hand-crafted bowls found all across the Arab and Islamic world during the rise of civilization, while interplays of light mirror the fanar lanterns of the region. After the event, Lusail Stadium will be transformed into a community space of schools, shops, cafés, sporting facilities and health clinics.

3. Ahmad Bin Ali Stadium

The stadium, designed by Danish firm Ramboll, is replete with design elements based on a desert motif. It features a façade design that incorporates a multitude of local patterns and designs, which draw on Qatari culture. The intricate façade reflects

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No.	Stadium Name	2022 Capacity	Legacy Capacity	Location, Distance from Central Doha	No. of Matches
1	Al Bayt Stadium	60,000	32,000	Al Khor City, 22 miles North	9
2	Lusail Stadium	80,000	–	Lusail City, 9 miles North	10
3	Ahmad Bin Ali Stadium	40,000	20,000	Al Rayyan, 12 miles West	7
4	Al Janoub Stadium	40,000	20,000	Al Wakrah, 14 miles East	7
5	Al Thumama Stadium	40,000	20,000	Al Thumama, 7 miles South	8
6	Education City Stadium	40,000	20,000	Al Rayyan, 8 miles Northwest	8
7	Khalifa Int. Stadium	40,000	40,000	Al Rayyan, 3 miles West	8
8	Stadium 974	40,000	–	Ras Bu Abboud, 6 miles East	7

the undulations of sand dunes while intricate geometric patterns reflect the beauty of the desert, native flora and fauna, as well as local and international trade. More than 80% of the construction material came from the original stadium that previously occupied the site.

4. Al Janoub Stadium

Designed by Zaha Hadid, a British-Iraqi architect; it is inspired by the sails of traditional dhow boats, in tribute to Al Wakrah's seafaring past. Besides a fully retractable roof, the stadium combines passive and mechanical cooling systems to battle the high temperatures. The operable roof has been designed in sympathy with the cladding using pleated PTFE fabric



Al Janoub Stadium

and cables. When deployed, the roof operates like a sail to cover the oculus above the field of play and create a sheltered environment during the summer. Passive design principles along with computer modelling and wind tunnel tests were used to maximize the effectiveness of the stadium enclosure to ensure player and spectator comfort.

5. Al Thumama Stadium

Al Thumama Stadium is designed by Ibrahim M. Al Jaidah, the chief architect of Arab Engineering Bureau, located in Qatar. This one-of-a-kind stadium has a dynamic and imaginative shape which celebrates local culture and traditions. Its bold, circular form reflects the gahfiya – the traditional woven cap adorned by men and boys across the Arab world. An integral part of family life and central



to traditions, the gahfiya symbolizes the coming of age for youth. Air is cooled using fans powered by solar energy and then released into the venue through large pitch-side nozzles and grills in the stands.

6. Education City Stadium

Education City, a vibrant center of learning and knowledge, shines a brilliant light on Qatar's position as a dynamic learning hub for students and academics across the Arab World and beyond. The stadium's ultra-modern design by Fenwick Iribarren Architects (Spain), blends seamlessly with traditional Islamic architecture. On the exterior, triangles create complex diamond-like geometrical patterns that sparkle as the sun moves across the sky. At night, a digital light show illuminates the façade. After the games, parts of the stadium will be converted into classrooms and event spaces for use by schools and universities.

7. Khalifa International Stadium

The historic stadium has hosted a long list of momentous sporting events since 1976. It received a complete refit for the World Cup as a reward for its long-standing service. Dar Al-Handasah (Egypt) was responsible for the design and supervision of the extensive renovation works, in compliance with the FIFA standards and requirements. The stadium's magnificent dual arches were always its most recognizable features. These remain intact – but now feature a wide canopy stretched out below them. This complements the stadium's cooling system to maintain a comfortable temperature. The new tier added 12,000 seats, while digital lighting and a modern façade brought a new sparkle.

The stadium received a four-star rating from the Global Sustainability Assessment System (GSAS), the first in the world to be awarded this rating.

8. Stadium 974

Designed by Fenwick Iribarren Architects (Spain), this unique stadium is constructed entirely from shipping containers and modular steel, being the first fully demountable covered soccer stadium in the world. The modular design requires fewer materials, creates less waste, and reduces the overall carbon footprint, while also minimizing construction time. The venue pays tribute to Qatar's long-standing tradition of worldwide trade and seafaring. "974" is the international dialing code for Qatar, and also the exact number of shipping containers used in construction. It is the first temporary venue in FIFA World Cup history. The shipping containers and seats used by the stadium are later to be fully dismantled and provided as assistance to other countries in the world. After the event, a waterfront development boasting fabulous facilities for the local community will spring to life, as well as a dynamic hub for business.

About the Authors

Vagelis Plevris is an Associate Professor of Structural Engineering at the Department of Civil and Architectural Engineering of Qatar University in Doha, Qatar. **Usama Ebead** is a Professor of Structural Engineering at the Department of Civil and Architectural Engineering of Qatar University in Doha, Qatar.



Save the Date: AEI Conference 2023

Climate Conscientiousness and Resilience: The Need for Integrated Building Solutions

The [Architectural Engineering Institute](#) of ASCE is pleased to announce the **10th Biennial Professional Conference for 2023** – *Live and In-Person!*

As our climate continues to change at a rapid pace, the need for our buildings and infrastructure to be resilient and adaptable is imminent. The A|E|C industry must reevaluate our current standards of practice for designing, constructing, and operating buildings to reduce building-related carbon emissions and minimize the negative impacts of climate-related hazards like hurricanes, floods, and heat waves. Strategies for reducing the drivers of climate change and improving the resilience of the built environment will require collaboration among academia, engineers, businesses, and technology innovators to implement integrated solutions into practice.



Building a Knowledge Base for the NextGen

Join the conversation by sharing your technical expertise, research, or technology solutions with the dynamic mix of architectural engineers, consultants, architects, engineers, academics, design professionals, technology software companies, emerging leaders, students and other industry experts.

Important Dates

JUL 6 | [Call for Abstracts open](#)
2022

SEP 12 | [Abstract submission deadline](#)
2022

OCT 15 | [Abstract acceptance notification](#)
2022

DEC 14 | Registration opens
2022

MAR 22 | Cancellation deadline
2023

APR 12 | Conference begins
2023

Top Reasons To Attend

- Discover and debate the innovative design and construction solutions to address the effects of our changing climate
- Attend the 4 keynote sessions to learn from the top innovators in the field
- Network with emerging professionals, future leaders, industry experts, and academics
- Learn about current research agenda in the A|E|C industry
- Earn PDHs by attending outstanding technical sessions – over 30 from which to choose
- Visit exhibitors and vendors that offer technical solutions to help advance your organization
- Experience the food, culture, and activities unique to Denver and the greater Rocky Mountain region
- Watch the [AEI Student Design Competition](#) and the [AEI Professional Project Award Presentations](#)

Contribute to the discussion on Twitter by using: **#AEIConf23!** ■

Employment Clearinghouse

The NCS provides the Employment Clearinghouse as a free service to its membership. The Clearinghouse allows members to post short notices for available positions or candidates seeking employment. All employers listed herein are equal opportunity employers. If you have questions, are seeking employment or would like to post a position please contact the [newsletter editor](#).

A+F Engineers

A+F Engineers is a well-established small structural engineering firm in Washington DC. This award-winning firm is looking for a motivated structural engineer with a strong academic background in structural engineering. We design a variety of complex structures including state of the art stadiums, airports, higher education facilities, laboratories, federal

and state facilities and more. Salary will reflect applicants' qualifications, 3–5 years' experience preferred but open to entry level BS and MS degree holders. Please send a resume with references and relevant salary history to manastasi@af-engineers.com.

ASCE-NCS Committee and Branch News and Updates

History and Heritage

Excerpt by Dryden Quigley of NBC 29,
Published: Jun. 4, 2022 at 9:33 PM EDT:

NELSON COUNTY, Va. (WVIR) – One hundred sixty four years after its completion, the Blue Ridge Tunnel is having a rededication as one of Virginia's Civil Engineering Landmarks.

"In this case, we have the longest railroad tunnel at the time 1858 when it was completed," Bernie Dennis with the American Society of Civil Engineers (ASCE) said. The 4,273 foot tunnel was the longest in the U.S at the time, now it's a Virginia civil engineering landmark. "It has to have contributed to the advancement of civil engineering either nationally or regionally, the project must be at least 50 years old and it has to be unique in either being the first or the last remaining example of such a project," Dennis said.



The tunnel has been closed since 1940, but reopened in November 2020 and since has seen more than 150,000 visitors. "It was full of mud, there was water, so that all had to be corrected, they had to put a pathway through it. So it's opened up to the public," Victor Crawford with the Virginia Section of the ASCE said. The original historical plaque was placed in the 1970's, but over time its location was lost.

"They can see the tunnel, the construction, where the picks and the black powder was used to break through the rock. So it's an educational feature. It's a public venue for adults and kids," Dennis said. The plaque also serves to inspire the next generation of engineers. "By having the plaque in a very visible location, students walking by can see what we did in the past and be inspired to pursue science, technology, engineering and math as their curriculum and become civil engineers," Crawford said.



In August of 2022, thanks to Chaz Weaver, the Plaque at the Crozet Tunnel has been repaired! Check it out for yourself!

Reston Branch

By Michael J. Magyarics, P.E., Reston Branch Vice President

After a long summer break, the Reston Branch has started planning meetings for the remainder of 2022 and into 2023. Similar to the prior meetings this past Spring, the Branch plans to host lunch-time presentations in a hybrid format for the first few events in the Fall. We will assess whether to change the format to all in-person for late-year meetings sometime in the next few months. Except for the next event in September, meetings are typically held on the 2nd Tuesday of the month.

On Tuesday, September 20th, the Reston Branch welcomed Rachel Aland from the Coalition for Reimagined Mobility (ReMo) for our monthly online webinar.



The Reston Branch's September virtual meeting featured the "Freight Data Exchange for Resilient Global Supply Chains" presentation. Unexpected disruptions caused by the COVID-19 pandemic created significant challenges for operators of the global freight sector. Unprecedented congestion and the breakdown of reliable access to goods for people, businesses, and governments worldwide highlighted the freight sector's lack of resilience and outdated communication tools. The Coalition for Reimagined Mobility's (ReMo) new report Solving the Global Supply Chain Crisis with Data Sharing defines how the global freight sector can forge a new path to reinvention, resilience, and sustainability through digitalization enabled

by standardized freight data exchange. Moreover, the report concludes standardizing the exchange of freight data can reduce global freight emissions by 22 percent. ReMo's report also provides global-level recommendations for policymakers to lead the way towards a more resilient and secure future for global supply chains.

Rachel Aland is the Freight Program Manager with the Coalition for Reimagined Mobility (ReMo), the premier global effort for more equitable and sustainable movement of people and goods around the world. As a transportation planner and economist, Rachel has advised governments, private investors, and international institutions on solutions to transportation issues in North America and across Asia. Rachel's expertise extends across freight, aviation, cross-border infrastructure investment, and public-private partnerships. Prior to joining the ReMo, Rachel was a Principal Consultant with CPCS, a freight-focused, Canadian-headquartered transportation strategy consulting firm. Rachel has also spent time in Singapore working for the World Bank's Infrastructure, PPP, and Guarantees team as well as AECOM's infrastructure advisory group.



Environmental & Water Resources Institute

On Thursday, September 15th, EWRI NCS welcomed Elizabeth Snee and Gretchen Bruggeman, environmental engineers with Booz Allen Hamilton, to our monthly webinar series.

Elizabeth Snee, PMP, has over 30 years of experience and is a leader within Booz Allen's Climate and Infrastructure business. She oversees a portfolio of business across multiple civil clients including the Environmental Protection Agency (EPA), Department of Interior (DOI), Federal Aviation Administration, and Department of Transportation focusing



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on environmental, climate change, infrastructure, and technology. Gretchen Bruggeman, EIT, has over five years of experience supporting drinking water, wastewater, and environmental programs for several federal agencies including the Department of Defense, EPA, DOI and Federal Emergency Management Agency.

They discussed the impacts of water and wastewater utility challenges on, and the inequitable access of these services to, underserved communities. Water is one of the most basic and critical resources for sustaining life and economies. The delivery of safe, reliable drinking water and the responsible handling and treatment of wastewater are major responsibilities of local government. This can be a challenge for many vulnerable communities as the costs for maintaining water systems continue to rise while the burden increasingly falls on those less able to afford it. Their presentation touched on recent water-related events that highlight institutional and management challenges faced by underserved communities.



Younger Members Forum Monthly Happy Hour. The NCS Younger Members Forum (YMF) holds monthly happy hours, alternating between Arlington, VA and Washington, DC. Happy hours are usually the first Wednesday of each month unless a holiday falls during that week.

The YMF held their annual planning meeting on September 7th at Ragtime Restaurant in Arlington, where we discussed the organization of future professional development and social events, as well as elected and installed a new leadership board for the 2022–2023 year.

YMF Current Position	2021–2022	2022–2023
President	Ariana White	Hala Abdo
Vice President	Amanda Frosztega	Javier Revilla
Secretary	Kush Vashee	Kush Vashee
Social Chair/Networking Coordinator Chair	Tara Luongo	Tara Luongo
Communications Chair	Todd Allen-Gifford	TBD
Professional Development Chair	Javier Revilla Hala Abdo	Joy Wang
Outreach/Service Co-Chairs	Nick Nigro	Nick Nigro Alex Perez
Diversity & Inclusion Chair	Kelsey Prem	Kelsey Prem
Fundraising Chair	N/A	Emily Kim

We are very excited for you to meet the team of Year 2022–2023!

As you can see, we have kept the same structure of the team, added a fundraising chair and are still recruiting for a communication chair as well as any potential positions that may be needed through the year.

Professional Development:

Additionally, if you have suggestions for professional development meeting topics or would like to become more involved with the YMF in other areas, please contact the YMF President at ncsymfpresident@gmail.com.

Stay Connected! Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page (ASCE National Capital Section Younger Members Forum), following us on Twitter (@ASCE_NCS_YMF), LinkedIn (ASCE National Capital YMF), and Instagram (@asce_ncs_ymf)

Get Involved! Are you interested in getting involved with more Younger Members activities? Do you have ideas for social events or volunteering

activities? The NCS Younger Members Group is always looking for new members! Let us know if you are not already on our mailing list! If you would like to become more active with the YMF or would like more information on our events, please email the YMF President.

Architectural Engineering Institute

AEI DC is looking for senior design guest lecturers for the architectural and civil engineering program at CUA for the current semester. Guest lectures are one hour, with some schedule flexibility, and can be on any topic relevant to civil or architectural engineering.

Please consider sharing your time and expertise with the next generation of Civil Engineers in the DC Area.

For further questions, reach out to Kelsey Sheridan with AEI (ksheridan@wje.com) or Jason Davison at CUA (davisonj@cua.edu).

Click here to sign up!