

Army Civil Works

October "Lunch" Meeting, October 20th at 12 PM

The Civil Works Program of the Army Corps of Engineers focuses on responsible development, protection and restoration of the Nation's water and related land resources. Civil Works projects are implemented and operated for commercial navigation, flood risk management, environmental restoration, hydroelectric power, recreation, and municipal and industrial water supply. In addition to these direct Federal investments, the Civil Works Program includes an important regulatory mission whereby the Corps regulates construction in navigable waters and the deposition of dredged and fill material in waters of the United States, including wetlands. The Civil Works Program also includes disaster preparedness response and recovery missions, under the Corps own authority (Public Law 84-99). In addition, the Federal Emergency Management Agency (FEMA) has designated the Corps as the lead agent for public works and engineering in support of FEMA's Federal Response Framework (Public Law 93-288).

For this presentation, David Leach will present on the Water Resource Development Act of 2020 (WRDA). He will discuss the WRDA history, legislative process, and current status of WRDA 2020. Additionally, he will describe the role of the Assistant Secretary of the Army for Civil Works in the WRDA legislative process, the policy review of water resource projects, the recommendations to Congress, and the development of implementation guidance. There will be opportunity for questions at the conclusion of the presentation.

About the Speaker

David Leach, P.E.
*Deputy Assistant
Secretary of the Army
(Project Planning and
Review)*



Mr. David Leach serves as the principal advisor to the Assistant Secretary of the Army for Civil Works on the planning and review of water resources projects across the nation. He is responsible for evaluating U.S. Army Corps of Engineers projects which encompass navigation, flood risk management, environmental restoration, water supply, hydropower, and recreation.

Previously, he served as the Chief of Military Programs Integration Division, HQUSACE, responsible for the execution of worldwide military programs and the integration of engineering, construction, real estate, and environmental activities in support of Department of Defense, Federal agencies and foreign nations. Mr. Leach entered the Senior Executive Service in January 2011 and was appointed as the Director of Programs for the North Atlantic Division, USACE. He was responsible for military, civil works, interagency and international programs throughout the Northeast United States, Europe, Africa and Israel.

Mr. Leach joined the Department of the Army in 1985, working with the Corps. He served as the Chief of the Military Integration Division at Corps Headquarters from 2016 to 2017. From 2011 to 2016, Mr. Leach served as



Please join us virtually on **Tuesday, October 20th** at 12 PM for a modified ASCE National Capital Section October 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 **Monday, October 19th**.

the Programs Director for the Corps' North Atlantic Division. While with the Corps, Mr. Leach also served as the Chief of Interagency, International and Environmental Programs in the North Atlantic Division; the Deputy Director of Programs and Business Management and the Director of Capacity Development, Project and Contracting Office in the Corps' Gulf Region Division in Baghdad, Iraq; and worked in the New York District, Philadelphia District, Europe District, and worked in Kuwait and Saudi Arabia while with the Corps' Trans Atlantic Division. Mr. Leach also worked for seven years with the US Department of Agriculture.

Mr. Leach received a Bachelor of Science in Civil and Environmental Engineering from Clarkson University and attended the Army Management Staff College. He holds a Facilities Engineering Level III Certification; a Defense Acquisition Workforce Improvement Act, Contracting Level III Certification, and is a Registered Professional Engineer in the State of New York. ■

President's Corner

Greetings members of the ASCE-NCS. I am thrilled to be stepping into the roll as the new ASCE National Capital Section President for the 2020-2021 term. I have been an active member within the NCS for the last several years, and have been glad to serve on the Board of Directors for the last four. It has been a privilege to work alongside the dedicated hard-working engineers serving on the Board of Directors, and would like to recognize these volunteer members, and especially the Past-President Kelly Cronin, PE.



Like many of our members, the NCS has been learning to adapt in light of the unprecedented events which have unfolded over the better part of the last year. Nonetheless, the NCS volunteers have been working hard to provide many different events and

activities for the 2020-2021 year. Our September Section Meeting, held virtually, had a great turn-out with approximately 70 of our members joining us for a lunchtime presentation. Additionally, recently the NCS Younger Members Group held their annual planning meeting and is in the process of transition leadership, the Reston Branch kicked-off their year with a virtual September Meeting, and along with several other virtual events organized by our committees/institute chapters.

This year the NCS is committed to continuing to hold frequent events for the Section, Reston Branch, and technical committees/institute chapters (Construction, EWRI, Geotechnical, Sustainably, among others). Additional committees continuing their work in support of the NCS and its members

include Best Practices, Corporate Relations, College Outreach, K-12 Education, Report Card and many more. Our goal is to provide a variety of content, events and activities suited to the interests of our members. I encourage all of our members to contact myself or any of the Board of Directors with feedback, suggestions and/or a desire to take a roll in planning/shaping future activities.

I look forward to getting to know and engaging with our membership in the coming year, and look forward to the time when we can transition back to in-person activities. Please feel free to reach-out with questions, feedback or to say hello!



Mike Venezia, PE
ASCE NCS President 2020-2021

Upcoming Events

Until further notice, all in-person ASCE NCS events have been cancelled. Opportunities for virtual events will be announced as they are planned.

Newsletter

Maria Raggousis, Editor

November 2020 Issue Deadline: October 20, 2020

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 (2020-2021)

Mike Venezia, President
Jameelah Ingram, Vice President
Vic Crawford, Treasurer
Norine Walker, Secretary
Kelly Cronin, Past President
Emily Dean, Previous Past President
Maria Raggousis, Newsletter Editor
Ariana White, YMF President

Lisa Anderson, Director
Elizabeth Wheeler, Director
Tricia Wolfbauer, Director
Joseph Whartenby Jr., Director
Shainur Ahsan, Reston Branch President

Committee Chairs

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

Understanding technologies emerging in highway construction

A book and webinar review by Ranjit S. Sahai, PE, F.ASCE

NCHRP Synthesis 534

The paradox of information today is that what you seek appears to be everywhere, yet its characteristics that matter: selection, relevance and applicability remain hidden.

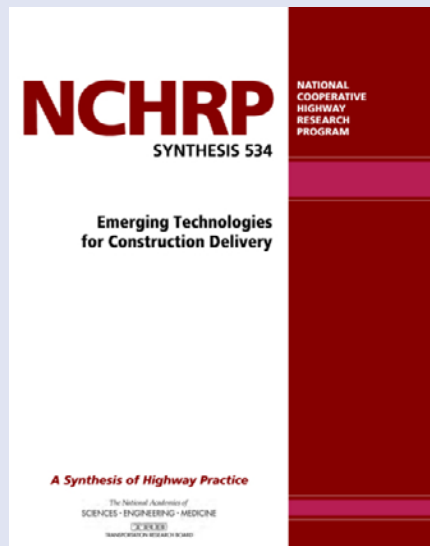
The “Synthesis” series of reports published by the National Academies Press seek to address this challenge by selecting trends through review of research and industry practices, designing and collecting survey data relevant to selected trends, and developing case studies of projects that applied emerging technologies. The report’s findings focus on what works for which situations and what has yet to evolve.

The report on emerging technologies in highway construction was published in 2019. It focuses on identifying technologies that are delivering efficiencies and improving safety and construction methods: visualization, interconnectivity, safety, instrumentation, and drones. On page 3, the report tabulates these five technologies, and for each indicates the areas of relevance.

For instance, it notes that drones are best for monitoring and documenting progress, inventory management, and surveying; interconnectivity between vehicles, equipment and tools for grading, paving and surveying; 3D visualization and augmented reality for constructability, communication with stakeholders and documentation; safety technologies for the protection of workers and motorists; and instrumentation for specialty projects having to do with boundary conditions and forces in structural members.

It’s a quick read at 100-pages, and like most of the content at nap.edu, a [PDF version](#) of this \$72 report can be downloaded at no cost.

Even if your construction projects have leveraged these technology trends in your highway construction projects, this report will help spark ideas for



new uses you may not have considered before.

For instance, you may have used interconnectivity between vehicles, GPS, ground sensors, and 3D design models for grading and paving projects – but may not have considered the use of autonomous rebar tying machines.

Chapter 3 is based on the results of a national survey of State DOTs. It tabulates how each DOT has used each technology to address which challenge. The next chapter presents case studies from seven DOTs: Minnesota, New York State, Ohio, Pennsylvania, Utah, Washington State, and Wisconsin.

3D Engineered Models webinar series

For those interested in exploring these technologies and their underlying concepts in greater detail, be sure to check out the “3D Engineered Models for Construction” webinar series from TC3, the Transportation Curriculum Coordination Council. In addition to a 30-minute Series Preview, it includes four 2-courses, each worth 2 PDH credits. These courses are available at no cost as a public service and an introduction to the other courses the organization offers. The four courses in this series include:

- Introduction
- Surveying
- Highway Design
- Applications and Quality Assurance

The half-hour course preview eloquently summarizes the motivation behind the development of these four courses: “One of the most-cited barriers to greater implementation of innovative technologies in the transportation sector is the lack of training and experience of contractors, engineers, and owners in new methods. To help bridge this knowledge gap, TC3 has developed the 3D Engineered Models for Construction training series via four highly engaging and interactive 2-hour Web-based training (WBT) courses.”

The first course is an introduction to the concept of the 3D engineered model, how it applies in highway transportation, and the lessons learned through its implementation.

The second course focuses on surveying with an introduction to modern equipment, techniques and tools, subsurface utility engineering, and the output of the survey, the building of a 3D engineered model.

The third course explores how the 3D engineered model is used in highway design. The fourth and last of the courses looks at the application of the 3D engineered model in construction, in constructability reviews, the techniques for automated machine guidance and the necessary control systems, and quality assurance.

About the Author

Ranjit, a Past President (2013–14) of ASCE-NCS, is a principal and founder of RAM Corporation, a firm serving State DOTs with a focus on traffic engineering design, stormwater facility inspections, and IT solutions for engineering workflows. He is also an [author](#) and speaker.



BLOCKCHAIN: A New Technology for the Future. How will it Affect the Construction Industry?

This month we have a surprise from Norway! As the readers of Dr. Z's Corner know, quite often, we invite world-famous scholars and engineers to share their knowledge and wisdom with our readers in this column. This month's guest author is the Co-Editor of Dr. Z's Corner and my good friend Prof. Dr. Vagelis Plevris. He will talk about a new technology called **BLOCKCHAIN**.

Bitcoin: The first implementation of Blockchain

In 2008, Satoshi Nakamoto introduced Bitcoin to the world. In his paper "Bitcoin: A Peer-to-Peer Electronic Cash System" he explained the idea of a system for electronic transactions that does not rely on trust, in other words a "trusted third party" is no longer needed. Nakamoto was the first to solve the double-spending problem for digital currency, proposing a novel idea based on a peer-to-peer network using proof-of-work to record a public history of transactions.

Although the name Satoshi Nakamoto is nearly synonymous with Bitcoin, the physical person that name represents has never been found. The real identity of Nakamoto still remains a matter of dispute.

Nakamoto proposed a decentralized approach to transactions, ultimately culminating in the creation of blockchains. In a blockchain, timestamps for a transaction are added to the end of previous timestamps based on

proof-of-work, creating a historical record. Because the record of transactions is distributed across many nodes in the system, it is practically impossible for a bad actor to gain enough control of the system to rewrite the ledger to their own advantage. The blockchain records are kept secure because the amount of computational power required to reverse them is enormous. This technology allows bitcoin to transfer value across the globe without resorting to traditional intermediaries such as banks.

Bitcoin, with a market cap of more than \$170 billion, is the largest implementation of Blockchain technology to date. The first Bitcoin transaction in the real world occurred in May 2010 when a Florida man paid for pizzas with the cryptocurrency. The man paid 10,000 Bitcoins for two pizzas, which today is worth over \$100 million!

General purpose technologies

General purpose technologies (GPTs) are technologies that can affect an entire economy. They impact economic growth and transform both household life and the ways in which firms conduct business. They have the potential to drastically alter societies through their impact on pre-existing economic and social structures. Examples of GPTs include the steam engine, electricity, the computer and the internet. These technologies fundamentally impacted how we live, expanded our lives (physically and

emotionally), helped build our cities and changed how we interact with the world.

Blockchain as GPT

Distributed Ledger Technology or simply *Blockchain* is a nascent technology that can simplify and secure transactions among parties. It is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a network. By many, it is recognized as a new form of GPT. Naturally, it takes time for a GPT to diffuse through the economy. Although Blockchain is still at the infrastructure building stage, it is expected to unleash several applications across different verticals within the next 5 to 15 years. Like the internet in its early years, Blockchain is hard to understand and predict, but could become ubiquitous in the exchange of digital and physical goods, information, and online platforms. According to Harvard Business Review "Blockchain is the first native digital medium for value, just as the internet was the first native digital medium for information."

How Blockchain can revolutionize the construction industry

Blockchain technology is new and there are several early challenges to tackle, but the potential of reshaping the construction industry for the better is too great to miss. Construction is one of the largest industries in the world and the infrastructure it creates

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Dr. Z's Corner, continued

is the backbone of economic growth and productivity. It is our inherent responsibility to facilitate its digital transformation to make it ready for the challenges of the future. Blockchain can be applied to several areas of the construction industry:

Contract Management: A *Smart Contract* is a computer program that works on an “if/then” principle. Smart contracts can identify accountabilities and trigger milestone-based payments. They could automate agreements thus revolutionizing construction contracts and payments.

Project management: Projects can benefit from a more decentralized and agile approach based on Blockchain, where transparency is high, and parties can be compensated for outcomes as well as for work performed.

Construction supply chain management: Blockchain can help trace physical items from origin to destination. It can improve payment settlements, compliance management and material planning, while smart contracts can be used to automatically purchase, track, and verify items in the supply chain, in real-time.

Building information modelling (BIM): Blockchain can be used to provide live and trustworthy information for BIM, by information sharing among present and future information

owners. Furthermore, it can help enhance the benefits of BIM by allowing architects and engineers to design on the same BIM model with clear ownership, while design and construction decisions can be recorded on the blockchain for future analysis and liability.

Property ownership and land titles: All real estate ownership and transaction records can be stored securely as tamper-proof digital records on the Blockchain. Such records are fully accurate, safe, and immutable. Blockchain immutability proves ownership and facilitates transactions.

Asset management and maintenance: Data and information related to the built asset need to be tracked at every stage of its life cycle. Blockchain provides a living ledger of everything that has happened with the asset. Blockchain can allow tracking and access to all the necessary data throughout the asset life cycle. Any improvements and refurbishments to the building can be documented, and the whole repository can be transferred to new owners if the asset is put up for sale.

Blockchain in construction: An exciting future ahead

We are moving to a digital economy where financial and physical assets will increasingly have digital

representations. Looking towards the future, Blockchain is going to be something that we will be hearing a lot more of. According to the World Economic Forum, by 2025, Blockchains will store around 10% of the world's GDP. Countries are trying to make the necessary legislative and regulatory changes to adapt to the new environment and make this change a reality. New opportunities arise. Blockchain has great potential to become an extremely positive force of change in the construction industry.

About the Author

Dr. [Vagelis Plevris](#) is a Professor at the Department of Civil Engineering and Energy Technology of [Oslo Metropolitan University](#) in Oslo, Norway. He is the Head of the Research Group “Structural Engineering” at OsloMet. He serves as Chief Editor for “[Computational Methods in Structural Engineering](#)”, a section of the journal *Frontiers in Built Environment*, by Frontiers in Switzerland.



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The Abridged Calumet “K”: Episode 1

The fascinating novel *Calumet “K”* by Samuel Merwin and Henry Webster was published in 1901. Its hero? A civil engineer!

An 8-episode condensed edition with text by Ranjit Sahai © 2020. All Rights Reserved. Illustration is from the original novel.

The contract for the two-million-bushel grain elevator, *Calumet “K,”* had been let to MacBride & Company of Minneapolis in January, and at the end of October it was still far from completion. Having grown impatient, MacBride telegraphed Charlie Bannon to leave the job he was finishing in Duluth to supersede Peterson, the constructor.

Upon arrival, Bannon entered an office with dirty windows and a pile of unopened mail and asked the clerk where Peterson was. “He’s out on the job somewhere,” he said impatiently as Bannon set his bag down, studied the blueprints, and a moment later went out.

A squat little man, big headed, big handed, big footed, with bright red hair was superintending a gang of laborers moving timbers back from the adjacent railroad siding to make room for a big bill of cribbing that was over ten days late. Bannon asked for Peterson.

“He’s up on the framing of the spouting house, over on the wharf there.” About forty feet above the dock, across from the railroad tracks, Peterson expertly framed a corbel for the spouting house by himself, instead of the normal crew of three. No wonder the job was late, it was running itself as best as it could

without the constructor’s guidance or foresight. On his way to the office, Bannon systematized the confusion in one corner, showed another gang how to avoid handling the timber twice, and did a hundred little things to expedite work. Without formal assumption of authority, Bannon established his supremacy by simply knowing how.

A short while later, Peterson came into the office with Max Vogel, the squat little man with the bright red hair, to see Bannon writing letters and dictating responses to the unopened mail for the clerk to transcribe. “We need to have a stenographer out here, Pete.”

Bannon spent the night with Peterson. Over dinner, Peterson asked Bannon if the office was concerned about progress on the job and explained he couldn’t help it if the cribbing had been held up like that. “Look here Pete, it’ll be November soon. The house has been promised for Page & Company to accept grain by the end of December. Cribbing or no cribbing, there is no getting



Peterson was framing the spouting house by the wharf. [Illustration by Harry Edwards.]

around that. You’re paid to direct the whole job, not to spend half a day laying corbels. Here today you had a dozen men throwing away their time moving a lot of timber that ought to have been put in the right place when it first came in.”

Peterson was silent. Bannon asked how long it would take the cribbing to get here from Ledyard. “About two days.” Next morning Bannon instructed Peterson to, soon after getting the job moving, have the electric company come and wire up the site in two days with arc lamps for nightshift as soon the cribbing arrived.

Bannon sat for a moment, then arose and looked at his watch. “I’m going to leave you, Pete,” he said, as he put on his collar. “Where are you going?”

“I’ve got to get up to the city to make the ten o’clock train. I’m going up to Ledyard to get the cribbing. Be back in a couple of days.” He put on his overcoat, said goodnight, and went out.

Novel’s condensed text by

Ranjit Sahai, ASCE-NCS Past President (2013–14), is a principal with RAM Corp serving State DOTs on projects in traffic engineering design, stormwater facility inspections, and information technology. ■



The project site and vicinity.

Region 2 Director's Report

Jack A. Raudenbush, P.E., F.ASCE, your Region 2 Director is a member of the Central Pennsylvania Section. Jack will be representing you at the next Board meeting on October 27 and 28, 2020.

While all ASCE members have participated in virtual meetings and events over the past few months, we must and will continue to improve the experience on these "screens". Many Sections and Branches haven't lost a step and continued their regular events via virtual meeting platforms. To keep ASCE's place in each of our fall schedules, please remember to sign up for your monthly meetings and take advantage of being able to participate in others Sections/Branches events as most have opened up their registrations to all members. A couple Society events that I highly recommend are shown on the image to the right.

Please keep me informed of your upcoming local meetings and events. I look forward to hearing from you.

Jack A. Raudenbush, P.E., F.ASCE
Director, Region 2
jraudenbush@navarrowright.com
717.944.0883

Visit an ASCE designed historic site

These sites illustrate the creativity and innovative spirit of civil engineers. Visit <https://www.asce.org/landmarks> to find sites near you. Share photos of your travels with me and I will post in Region 2 correspondence and on our Region's social media pages.

The Mason Dixon Line – The Mason Dixon line, commonly referenced as the boundary between Pennsylvania and Maryland, also includes a portion of the northern boundary of West Virginia and the western boundary of Delaware. It was surveyed between 1763 and 1767 by Charles Mason and Jeremiah Dixon. The Mason–Dixon line was marked by



stones every mile 1 mile and "crown-stones" every 5 miles, using stone shipped from England. The Maryland side says "M" and the Delaware and Pennsylvania sides say "P". The parallel (latitude line) was established as 15 miles south of the then southernmost point in Philadelphia.

Mason and Dixon started off with a crew of five, but by the time they got towards the end of the survey the party had grown to about 115. They thought at the

end of the survey that the stones were accurate within 50ft. But what is realized today is that some of them are as much as 900ft off. The reason is not because Mason and Dixon were inaccurate in their execution nor because the equipment was faulty. It was actually gravity. Gravity had an impact on the plumb bob they were using. They had a 6ft telescope and it used a plumb bob on a fine wire. But gravity varied from location to location because of the influence of mountains. ■



ASCE-NCS Helping Students Discover STEM

This summer ASCE-NCS teamed with RePicture to help science, technology, engineering, and math (STEM) college and high school students discover the amazing work done by civil engineers and other STEM professionals. For the *RePicture STEM Resume-Builder Program*, students researched, wrote about, and published on RePicture.com a summary of projects done by STEM professionals. The projects covered a wide variety of topics based on the student's interest. The projects are being used by high school and college students to understand the type of work different STEM professionals do. The RePicture Summer Program was developed to help students whose internships or jobs were canceled due to COVID-19 to still have a meaningful summer.

ASCE-NCS sponsored an award for the program. For the "ASCE-NCS Hidden STEM Heroes in the Nation's Capital Award," students identified, researched, and wrote-up a project located in the Washington DC area that was designed by an African American STEM professional. The winning project was "The True Reformer Building" by high school student Jennifer Puac. ASCE-NCS

Secretary and Education Committee Chair, Jameelah Muhammad Ingram announced the award winner during the virtual awards ceremony in August.

Jennifer wrote that the True Reformer Building was constructed in 1903 and was designed by John Lankford. The True Reformer Building was the first building financed, designed, built and owned by the African American Community after Reconstruction. It was initially the headquarters of the True Reformers, an organization that provided economic assistance to the Black



Rudi Riet, some rights reserved, CCO-2.0

community. The building was listed as historic in 1989.

For the RePicture Summer Program, students submitted over 150 projects for awards from various STEM organizations. Civil Engineering student Salma Shahin noted "I loved that I had the freedom to research topics related to my field of interest and to get as creative with them as I wanted. I liked that RePicture was structured to allow me to discover the STEM topics that I am passionate about and challenged me to try to expand my knowledge and unlock more potential career paths."

Students adding the summer program to their resume to show they are proactive, goal oriented, and good writers. The RePicture Program will continue this fall and ASCE-NCS will again sponsor an award. If you know a high school or college student that is self-motivated and wants to learn more about STEM careers and build their resume, have them apply to the free *RePicture STEM Resume-Builder Program* by going to RePicture.com/students. You can also explore all the projects written by students and professionals at RePicture.com/projects. ■

ASCE-NCS 2020 Membership Survey

By Norine Walker

Over the last several months we have collected member input through a Membership Survey. Our Section communication largely depends on e-mail, which members confirm is best, and members said that the contact amount is about right. **95 members provided their e-mail addresses with an interest in becoming more involved with the Section.** If you don't get contacted, reach out to Norine Walker at nwalker@systra.com or any of the board members whose e-mail information is on the newsletter.

Of the 275 responses, we learned the following:

■ The subject area(s) of most interest to members for meeting presentations

and other activities are (in order of interest) are (in order of priority):

1. Construction
2. Transportation & Development
3. Structural Engineering
4. Environmental & Water Resources
5. History & Heritage

■ Members told us that Education/Learning and Networking were the most beneficial aspects of the Section, followed by Earning Professional Development Hours.

■ Although we opened up the suggestions for meeting locations far and wide considering our membership base and suggestions made to include Prince George's County and Montgomery

County, the majority selected preferences for dinner meetings in Arlington and lunch meetings in Reston. The least favored were the reverse, dinner meetings in Reston and lunch meetings in Arlington. A member added a comment: *I really like the convenience of going to Reston Branch meetings, since I live in Reston.*

■ Curious about whether your dinner meeting table mates are reimbursed for the costs of ASCE-NCS member dues or activities? About 30% are reimbursed and about 30% said that they are not, a large portion because they do not work (mostly retired).

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ASCE-NCS 2020 Membership Survey

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■ The core group of members that regularly attend the Section's regular (Up until COVID-19) dinner meetings is only about 11% of our Section members with 13% attending 4-6 meetings in that period. The largest portion – 38.5% do not attend any meetings (i.e., dinner-time talks). The primary reasons for not attending more is that the meetings times or locations are not convenient (29.4%) or Don't have time to attend (25.1%). We received several comments like this one: "My biggest issue is just that I don't have time to participate fully." Thank you for even completing the survey! For members that are starting a career and starting a family there are barely enough hours in the day. Hopefully, some remote activities will attract you and can fit into your schedule during this time.

■ When asked how members would like to participate in the Section activities, a large portion of members (88.3%) are interested in attending meetings. Another noteworthy portion (32.7%) are interested in participating on a technical committee with many (28%) interested in helping with student or educational activities. We have a healthy amount (21.4%) interested in speaking or arranging for a speaker. Maybe you are a subject matter expert or know of someone that has exciting project or aspect of a project to share knowledge of?

■ Beyond meetings members are most interested in Touring a construction site with a large portion interested in outreach to high school students. Also high vote getters were "Hearing a Capitol Hill staffer", "Expert panel discussion of challenging topics", "Learning about an Engineers Without Borders Visit or

Adventure". If you are able to champion one of these topics, please volunteer by letting someone on the Board know.

■ We offered some areas that members might be interested in participating and learned (multiple responses acceptable) that these Section Technical or Management Committees are of most interest (in order of priority):

1. Construction
2. Structural
3. Transportation
4. Geotechnical
5. Sustainability

Thank you to everyone that participated in the Membership Survey! Good insights into preferences have been learned from the survey responses, which will be addressed in the coming year. ■

WSSC Water Retains Coveted AAA Bond Rating

All Three Financial Agencies Highlight Utility's Stable Financial Outlook

Laurel, Md. – September 1, 2020 –

WSSC Water today announced it has once again earned AAA bond ratings from all three financial rating agencies, Fitch Ratings, Standard & Poor's Global (S&P) and Moody's Investor Service. The bond sale include \$299 million in consolidated public improvement general obligation bonds and \$51 million in green bonds.

All three financial firms note WSSC Water's stable financial outlook as a key factor in assigning the utility the highest rating possible. In S&P Global's rating overview, the firm states, "WSSC Water's credit quality is anchored by the extremely strong management team that has historically demonstrated an ability and willingness to reduce expenditures and increase rates to maintain sufficient coverage and liquidity."

"Securing this premier rating – especially during these financially

unpredictable times – highlights our ongoing commitment to keep costs down and spend customer dollars wisely," said WSSC Water General Manager and CEO Carla A. Reid.

Proceeds from the general obligation bonds will fund the following projects:

- Small-diameter water distribution system rehabilitation program
- Piscataway Water Resource Recovery Facility upgrades
- WSSC Water contribution to Blue Plains Advanced Wastewater Treatment Plant projects

Green bonds are issued specifically to fund projects with significant environmental benefits. The issuance of green bonds requires development of the WSSC Water Green Bond Framework documenting the specific use of the bond proceeds, the criteria and process

for evaluation and selection of projects, the management of the proceeds and ongoing reporting on key performance indicators.

Proceeds from the sale of the green bonds will fund the following upgrades:

- Potomac Water Filtration Plant upgrades
- Large-diameter water distribution system upgrades

To learn more about WSSC Water's financial information visit wsscwater.com/fin. For more information on the utility's green bonds visit wsscwater.com/greenbonds.

About WSSC Water: WSSC Water is the proud provider of safe, seamless and satisfying water services, making the essential possible every day for our neighbors in Montgomery and Prince George's counties. We work to deliver our best because it's what our customers expect and deserve. ■



ASCE-NCS Committee and Branch News and Updates

Corporate Relations Committee

Since COVID-19 is challenging many companies and students, any money from this year's corporate sponsorships will go to the Scholarship Fund, which helps local engineering students. In addition, if your company is hiring, we can post your position, for no cost, in our newsletter. The ASCE-NCS newsletter is distributed to over 8,000 local engineers and is a great way to find qualified engineers. If you are interested in donating to the Scholarship Fund or posting a job announcement, please contact Lynn@RePicture.com.

Reston Branch

By Christopher J. Friend, P.E., Reston Branch Vice President

On September 15th, ASCE Reston Branch held their first technical meeting, in a virtual format. David H. Steigler, Associate Vice President for Pennoni Associates, presented. David's presentation was titled "The Making of a Place". It highlighted the art of blending land planning, architecture, civil engineering, and landscape architecture to create a mixed-use, transit orientated development in Northern Virginia. The presentation showcased a site located one half mile from the new METRO Innovation Station. David highlighted the opportunities, constraints, and challenges encountered while navigating through the entitlement process with Fairfax County. Challenges of designing the infrastructure, parks, residential, and retail components of this project were also discussed.



During the September technical meeting, Brooke O'Donnell (JMT) was sworn in by Jack Raudenbush, Region 2 Director for ASCE, as an At-Large Director for the Reston Branch. Welcome to the Board Brooke!

Given the current nature of the pandemic, the ASCE Reston Branch is planning to have our technical meetings in a virtual format throughout the fall. In

the spring, the Board will reevaluate the situation and will schedule virtual or in-person meetings as appropriate.

The Reston Branch has launched a **group** on LinkedIn to provide regular updates for the branch as well as offer a place for branch members to connect. See the following link for additional information: <https://www.linkedin.com/groups/13759693/>

Reston Branch Upcoming Events:

October 13th – Virtual Technical Meeting – Time and Topic TBA

History and Heritage Committee

Benjamin Wright: A 250th Anniversary Commemoration

2020 is the 250th anniversary of Benjamin Wright's birth and the 50th anniversary of his being declared by ASCE the "Father of American Civil Engineering". Among his many accomplishments, Wright served as Chief Engineer of the Erie Canal and the Chesapeake and Ohio Canal. National Capital Section's own Steve Pennington has completed a new biography of Wright, "Benjamin Wright – the Father of American Civil Engineering", to be published by ASCE Press in October to coincide with the Wright anniversary and with the ASCE 2020 Virtual Convention.

Pennington is a corresponding member of the ASCE National History and Heritage Committee and is actively involved in the NCS History and Heritage Committee. He writes, "I first became interested in the history of the civil engineering profession while in college. In the engineering department library I picked up a copy of David Steinman's history of the Brooklyn Bridge *The Builders of the Bridge: The Story of John Roebling and His Son*. Steinman himself became a pre-eminent bridge designer. I found the story in Steinman's book fascinating and from that point, in and around my professional work, I became a student of the profession's history. Early in my career I was fortunate to become an associate of Neal FitzSimons, a structural engineer in private practice and avid writer on engineering history, with several papers and monthly articles in *Civil Engineering* magazine. Neal passed away in 2000, but it was through my

close professional association with him that I first became exposed to Benjamin Wright."

NCS BOD Authorizes Two New Memorial Scholarships

Last summer, the NCS Board of Directors authorized two new Memorial Scholarships as recommended by the Scholarship Trust. Beginning in 2021, new memorial scholarships will be offered in the name of Neal FitzSimons and Jay Padgett. Neal and Jay join Gayle Hathaway, Harold Williams, James Harland, and John Hummel, making six memorial scholarships administered by the Scholarship Trust.

Neal FitzSimons

passed away in 2000. As a Civil Engineer he worked for the Army Corps of Engineers and the Federal Emergency Management Agency before opening his private practice Engineering Counsel in Kensington, MD. He specialized in structural forensics and worked on highway bridge projects; designed prefabricated concrete arch spans; and, testified as an expert witness on structural collapses.



He was born in Torrington, Conn., and raised in New York City. He graduated from Cornell University and served two stints in the Army, part of that time as an intelligence officer.

Neal was NCS President in 1982 and went on to serve as ASCE Vice President (Zone 1) in 1991.

An advocate of civil engineering history, he founded the American Society of Civil Engineers' History and Heritage Committee. He also wrote extensively about engineering history and was an adjunct faculty member of the University of Maryland school of engineering.

J. A. (Jay) Padgett

passed away in 2018. He was a native of the Washington, DC area, where he practiced geotechnical engineering. Jay was committed to life-long learning, professional mentoring, and advancing the vision of civil



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engineers as leaders and innovators, facilitators, and synthesizers.

Jay earned a BS degree from Dickinson College, with a major in physics and a minor in mathematics. While serving in the Army Corps of Engineers, Jay earned a Master's degree in Civil Engineering from Rensselaer Polytechnic Institute before going on active duty.

He was the president and founder of GeoServices Corp., a respected firm specializing in subsurface exploration services and geo-instrumentation. Jay's knowledge of regional subsurface conditions, and his ability to get his resourceful field team to obtain hard-to-get geotechnical information in hard-to-reach and congested places, was unparalleled. He was a particularly lucid writer, a trait that further enhanced his ability to solve and synthesize complex problems.

Throughout his professional career, Jay volunteered countless hours to ASCE and to the civil engineering profession at the local, regional, and national level. He was NCS President in 1986. Notably, for the last 30 years, Jay was a sustaining driving force behind the NCS Scholarship Trust. At the Society level, Jay served on ASCE's Board of Directors, and spent over 18 years working on Society governance, helping rewrite and reorganize the Society's governing documents; helping organize ASCE's 1996 National Convention; and, an active participant in ASCE's Vision for 2025 summit.

Architectural Engineering Institute Committee

The Architectural Engineering Institute (AEI) Committee held their annual planning meeting via web-conference on Thursday, September 24th. We had a mix of new and familiar faces, and we are excited to begin our professional activities for the remainder of 2020 and have a variety of ideas to tackle staying connected in the age of COVID-19 restrictions.

To start, we will be partnering with the AEI National Student Officers and hosting a "Virtual Etiquette Event" open to all student chapters of AEI on how to successfully network or interview in a virtual setting. The event will be held at 6:30 PM EST on Thursday, October 8th, 2020.



Younger Member's Forum

By Kush Vashee, P.E., CAPM, M. ASCE

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.

Over the summer, the NCS YMF held three virtual networking happy hours over Zoom and Webex. The group will host their next happy hour starting at 6PM on October 7th at [Dacha Beer Garden \(Navy Yard\)](#) in Washington, DC near the Navy Yard Metro. We hope to see you there!



Professional Development: 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.

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HOSTED BY:
AEI DC CHAPTER
AND AEI NATIONAL
STUDENT OFFICERS

AEI

VIRTUAL ETIQUETTE EVENT

PRESENTERS:
CAMILLE C. STEFANI - WJE ASSOCIATES, INC.
TING-WEN WANG - THORNTON TOMASETTI
MARIA RAGGOUSIS - SIMPSON GUMPERTZ & HEGER
LEE BENZEL - SUMMER CONSULTANTS, INC.

**OCTOBER 8, 2020
6:30PM EST**

**ZOOM LINK:
HTTPS://PSU.ZOOM.US/J/9
8063933083**

**AEI DC
Professionals
share their
experience and
what they are
looking for when
it comes to
proper virtual
etiquette.**

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.

Education Committee

by Jameelah Muhammad Ingram, PE, M.ASCE

Opportunity to Polish Your Resumé

The year 2020 has undergone dramatic changes, especially with how business is conducted. An interview may be via video instead of in-person. Instead of

finding the right shoes to wear with your suit, your focus may be on finding the best video background. There is at least one thing that remains the same when it comes to finding the right job though. You will need a fantastic resumé! Students, please see below for an opportunity to polish yours and a preview of questions to be covered at the workshop:



ASCE NCS Student Chapter Resumé Clinic on October 15th @ 5 PM

Students: On October 15th at 5 PM, ASCE NCS will host a virtual resumé workshop open to all ASCE NCS Student Chapters. It will feature a resumé clinic and tips for landing your dream job. A registration link will be provided through your ASCE NCS Student Chapter President or Faculty Advisor in October.

Professionals: If you are interested in becoming a professional resumé reviewer for ASCE NCS, please contact

Jameelah.muhammadingram@wsp.com to assist at the October 15th event.

Preview of Questions

- What is my resumé's job?
- What do I do if I do not have enough work experience?
- How do I network in a virtual environment?
- Do I need to include a list of references on my resumé?
- How do I handle interview questions that I do not know the answer to?

Please come to the clinic for answers...

ASCE in Politics

2020 is an important election year in the United States of America. As an ASCE Member, there are a myriad of ways that students can become involved in the political process. Please take a look here: <https://www.asce.org/advocacy/>. ■



Save the Dates

<p>OCT 28 – 30 2020</p> <p>CONFERENCE</p>  <p>ASCE CONVENTION A VIRTUAL EVENT</p>	<p>MARCH 10 – 13 2021</p> <p>CONFERENCE</p>  <p>SEI STRUCTURES CONGRESS SEATTLE, WASHINGTON</p>	<p>APR 7 – 10 2021</p> <p>CONFERENCE</p>  <p>ARCHITECTURAL ENGINEERING INSTITUTE CONFERENCE DENVER, COLORADO</p>
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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](#) and visit our [jobs page](#).