

## The Heights School, Arlington VA

May "Lunch" Meeting, May 19th at 1 PM

Located right on Wilson Boulevard off of downtown Rosslyn, the new Heights school opened in time for the 2019–2020 academic year and enrolled 775 6th through 12th grade students in Arlington County. Bjarke Ingels Group (BIG) is the architectural mastermind behind the cascading terraces and interlocking, yet floating, boxes. The building fans around a pivot point, which serves as the building's core both for the structure and circulation. As the structural engineer of record, Silman worked closely with the design team to preserve the open concept for the occupiable space while developing a helical load path around the pivot point. Early involvement from Gilbane, the construction manager at-risk, proved successful in proactively planning, understanding, coordinating, and ultimately executing the design team's vision.



### About the Speakers

**Jason Myers, PE, SE, LEED AP BD+C, Associate – Silman**

Role: Project Manager, Structural Engineering



Jason Myers joined Silman in 2013 as a structural engineer and was promoted to Associate in 2014. Jason has a strong background in the technical design of new construction and renovation of existing buildings. His experience focuses on long-span steel structures, concrete structures, floor vibration,

and working with complex structures. Jason received his Master of Science in Structural Engineering as well as a Bachelor of Science in Civil Engineering from the University of Nebraska.

As a project manager for the structural engineering of a project, he has worked on multiple new construction projects, including the recently completed structure for The Heights Building, as well as renovation projects, coordinating the scope and schedule with the agency, architect, and other engineers in accordance with the guidelines of the project. Jason provides oversight in the form of quality assurance and quality control to maintain communication and consistency throughout the project's duration.

**Tyler Swartzwelder, Project Executive – Gilbane Building Company**

Role: Project Manager, Construction



Gilbane Building Company

Tyler Swartzwelder, project executive at Gilbane Building Company, has 14 years of industry experience, focusing on all aspects of project delivery from

Please join us virtually on **Tuesday, May 19 at 1 PM** for a modified ASCE National Capital Section May 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](mailto:president@asce-ncs.org). Please [click here](#) to register by **Monday, May 18**. To add the event to your calendar, [click here](#).

preconstruction through completion. In that time, he has served in various roles and has worked on a variety of projects ranging from high schools to museums. Tyler recently completed The Heights Building and is currently managing construction of the Arlington Public Schools' New Elementary School at the Reed Site and the design-build Metro DC Headquarters. He received his BAE in Architectural Engineering from Pennsylvania State University.

During preconstruction, Tyler oversaw and coordinated project meetings and consultation, cost estimates, project schedules/phasing, constructability reviews, site logistics planning, and procurement, as well as development of the GMP. He was responsible for the day-to-day supervision of the procurement process by participating in the development of a bidding strategy and bid package breakdown. ■

## President's Corner

While much of the DMV is under stay-at-home orders, many of our fellow civil engineers are "essential workers." We have members who still go into work everyday to make sure people have clean water to drink and wash with, process waste and recycling, and maintain and construct critical infrastructure. I want to thank these individuals for continuing to do their job for the benefit of society. I am also incredibly grateful for other essential workers, like doctors and nurses, grocery and pharmacy employees, cleaning crews, and delivery personnel, among others.



No one knows exactly how long the current health crisis will impact our society and each one of us has been impacted in different ways. Many people have lost their jobs. People have gotten sick. Many people – including myself – are struggling to work and

simultaneously be attentive to their kids at home with them. We can't see all the friends and family that we would like to.

But – and I am fully aware of how fortunate I am – for me, the current situation has given me opportunities to do things that I

wouldn't have necessarily experienced otherwise...

- My 9-month old daughter started crawling – I was home with her to see it instead of her daycare.
- I go on a family walk with my husband and two children every afternoon – Typically during the week I only see my family for a few hours in the morning before work or in the evening after work.
- My civic association has a different food truck come to our

neighborhood every week – I've been able to try food that I otherwise wouldn't.

- My co-workers host a virtual happy hour every Friday afternoon – I'm normally out in the field a lot and don't always get to catch up with my co-workers.

I know we've all been told that "we'll get through this". It's true. We will. If there is any way that the ASCE community can help you, please do not hesitate to reach out ([president@asce-ncs.org](mailto:president@asce-ncs.org)). I look forward to seeing everyone at a future event and hope that you all continue to stay safe and healthy!

Best,

Kelly Cronin, PE  
ASCE NCS President 2019–2020

## 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

**September 2020 Issue Deadline:** August 15, 2020

**To Submit Articles:** [newsletter@asce-ncs.org](mailto:newsletter@asce-ncs.org)

**NCS eNewsletter Archives:** go to [www.asce-ncs.org](http://www.asce-ncs.org) and view along the sidebar.

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

## National Capital Section

### Officers (2019–2020)

**Kelly Cronin**, President  
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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.

## 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 in Reston, Virginia, on July 10–11, 2020.

We have all heard and read about COVID-19 over the past few months. ASCE has been proactive since this novel virus was realized here in the US and has instituted multiple webinars, communicated with civil engineers, elected officials, and governing bodies and continues to offer a multitude of support programs to our members to specifically help with this life changing event. While more information is being shared everyday by ASCE, we currently have several references that are helpful:

**Thursday's at 3** – weekly webinar roundtable discussing current and relevant topics affecting ASCE members. And COVID-19 Virtual Resources. Go to: <https://collaborate.asce.org/covid-19/virtual-events>

**Plot Points Podcast** – thru the month of April, COVID-19 Community Calls are available as daily podcasts. Go to: <https://news.asce.org/tag/asce-plot-points/>

**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 Walnut Street Bridge, Harrisburg, PA.** When completed in 1890, it's fifteen truss spans with an overall length of 2820 feet, the Walnut Street Bridge was the finest and largest example of the standardized wrought



iron truss bridges produced by the Phoenix Bridge Company.

Civil engineer Samuel Reeves founded the Phoenix Bridge Company. Wendell Bollman, inventor of the Bollman Truss, created the company's Phoenix column – a circular compression member assembled from flanged, rolled wrought-iron segments. The superstructures of these bridges were completely prefabricated of wrought iron in the company's plant at Elizabethtown, Pennsylvania.

The Phoenix Bridge Company prided itself on its ability to deliver written estimates based on the answers to five questions, each regarding span, width, and clearance. As such, the company was a major force in the explosive expansion of the transportation infrastructure in the United States.

The bridge was closed to vehicular traffic in 1972 as a result of floods during

Hurricane Agnes, but remained open as a widely used pedestrian bridge and recreational amenity.

On January 20, 1996 two spans of the West Channel bridge were lifted by an ice jam during a flood and carried downstream where it became temporarily lodged beneath the Market Street Bridge.

**Shout-Out to – Loujin Daher, P.E., M. ASCE** – The Central PA Section just gained an excellent member on its Board. Ms. Daher was recently appointed Vice President of the Section and she adds another young member to its vibrant leadership. She graduated from Bucknell University with a Bachelor's Degree in Civil Engineering where she was awarded the Jack Kent Cooke full tuition scholarship. Five years ago, she graduated and began working for Gannett Fleming, Inc., in Camp Hill, PA. Her current responsibilities include directing and managing field exploration, conducting engineering analyses on earthen structures, and performing technical calculations needed for engineering projects. Loujin has been a member of ASCE since 2015. She is also a Connected Women Ambassador, and Sergeant at Arms of Gannett Fleming Toastmasters Club.

Loujin says that she will take advantage of the opportunities within ASCE to build her network, build leadership skills, advance civil engineering and serve the public good. Thank you to Loujin for her enthusiastic participation in this great organization!

I look forward to seeing you at ASCE events.

Jack A. Raudenbush, P.E., F.ASCE  
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## To optimize, or not to Optimize, that is the Question for the Construction Industry

As stated by the famous mathematician and astronomer Leonhard Euler: "Nothing happens in the universe not relying on the rules of maximum or minimum." The use of the mathematical term of optimization can be identified to the era of great mathematicians, physicists and astronomers like Cauchy, Lagrange, Kepler and Newton while minimization was presented a lot prior by Euclid. Notwithstanding these early advancements, engineers discovered the value of optimization not before 1950 when research innovation on optimization algorithms was supported by computing power. Nevertheless, civil engineers remain skeptical in incorporating optimization in their professional practices.

### Trial and error vs optimization

The first production-worthy light globe was the outcome of a long and repetitive trial-and-error procedure by Thomas Edison for identifying the optimal material. While Edison had limited knowledge on material properties as electrical resistance and conductance, modern engineers present remarkable technical experience and knowledge that empowers them to deliver high-quality designs based on their expertise. Designs' weaknesses are detected via testing and are corrected through experience-based make-it-and-break-it procedures.

Advancements in available computing hardware technology and software enabled the development of numerical prototypes of designs, used for performance assessment prior to construction while time and cost efficiency of the trial and error phase was improved. It is worth pointing out that there exist two constraints that restrict further efficiency improvement. The first one is the significant workload demand for interpretation of design cycles of the trial and error approach. The second factor concerns the balance between project complexity and uniqueness versus human intuition. The physical limitations of the human brain in combinatorial calculations have been exceeded by the computational abilities of available hardware technology. The inventive solutions of engineers are limited by time and cost but could be assisted in achieving near-optimal design solutions in an algorithmic manner.

The added value created by improved productivity and production of near-optimal solutions establish the need for algorithmic aid in structural design. The added value is generated by reducing design cost and time while increasing responsible material usage, eco-friendliness and construction cost efficiency of projects. Numerical optimization is the means of transportation from a far-optimal design to a near-optimal one with respect to predefined parameters, restrictions and goals.

### Optimization in the engineering profession

Since the 1960's many research studies on applied structural design optimization have been published, where structural design optimization was effective in various problems. However, civil engineers (especially structural engineers) seem susceptible to applying optimization-based design procedures. Nevertheless, mechanical and aerospace engineers have already adopted optimization into their profession practice. For instance, in the automotive industry, BMW has adopted optimization procedures in the development of new diesel engines. While in the aeronautic industry, Airbus used a design optimization approach for developing the wings of the aircraft A380.

### First steps of optimization in AECl, what is the benefit

Aiming to identify the benefits of adopting optimization-based structural engineering by the Architectural, Engineering & Construction Industry (AECl), it is important to underline that: (i) The Building Sector (BS) is the higher contributor to global greenhouse gas (GHG) emissions (30% of GHG emissions) while it also consumes almost 40% of global energy, 25% of global water, 40% of global resources, (ii) BS estimated worth is around 10% of the global GDP (USD 7.5 trillion) with more than 120 million people employed, whereas (iii) AECl is expected to expand by 85% to USD 15.5 trillion worldwide in 2030, with U.S., China and India accounting for almost 60% of this growth. With respect to the above issues, the question for AECl is: "To optimize, or not to optimize?". The answer to this question is straightforward, definitely Yes; if AECl adopts design optimization principles the environmental impact and economic

development of AECl is expected to be severe. More specifically, a hypothetical scenario of 10% average material usage reduction is achieved on 5% of the project volume of AECl, the cost reduction translates to USD 15.0 billion for 2016; while the environmental benefit translates to 6.0 million metric tons of CO<sub>2</sub> reduction, equal to the annual emission of cities like Pittsburgh, Paris, Milan or Athens.

Worth noticing are the pioneering steps in the field of structural engineering design optimization performed by **OptiStructure**, a startup recently established in London UK, that aims to institute value engineering revolution in AECl via structural design optimization. OptiStructure optimization services have recently been applied to a 535 meters high-rise reinforced concrete building, to be constructed in the Persian Gulf area. The environmental benefit achieved by the optimized design delivered corresponds to 12.7% and 11.2% reduction on GHG CO<sub>2</sub> emissions and energy consumption, respectively; while cost reduction of 8% was achieved that corresponds to USD 6.8 million.

Construction technology leaders are preparing for a massive storm of innovation as the AECl moves to a digital era. As optimization represents a pillar of digitizing construction and BIM technology, we expect that structural engineering will undergo a lot of changes in the near future. OptiStructure since its inception has been present in Singapore, Indonesia, India, United Arab Emirates, Greece, UK, Mexico and the USA looking constantly to expand its reach and impact. If you are interested in partnering with OptiStructure, please do not hesitate to contact me at [nikos.lagaros@optistrucre.com](mailto:nikos.lagaros@optistrucre.com) or via our LinkedIn page at <https://www.linkedin.com/company/optistrucre/>, and <https://www.linkedin.com/in/nikos-lagaros-086323/> anytime. We are constantly looking for new partners.

### About the Author

Prof. Nikos D. Lagaros is the Dean of the School of Civil Engineering at the National Technical University of Athens (NTUA), Greece and advisor at OptiStructure.



# Setting the stage: Calumet “K” by Merwin-Webster

by Ranjit S. Sahai, PE, F.ASCE

*Calumet “K”* inspires me to leap over seemingly unsurmountable hurdles. The novel was published in 1901. It is the story of Charlie Bannon, a construction manager, who knows what it takes to get things done in time, and proceeds to do so against all odds – be it a lack of transportation, corruption, insubordination, or other unforeseen events. Charlie is the epitome of an efficacious, thinking, problem solving mind – a portrayal so rare in modern fiction.

### The project

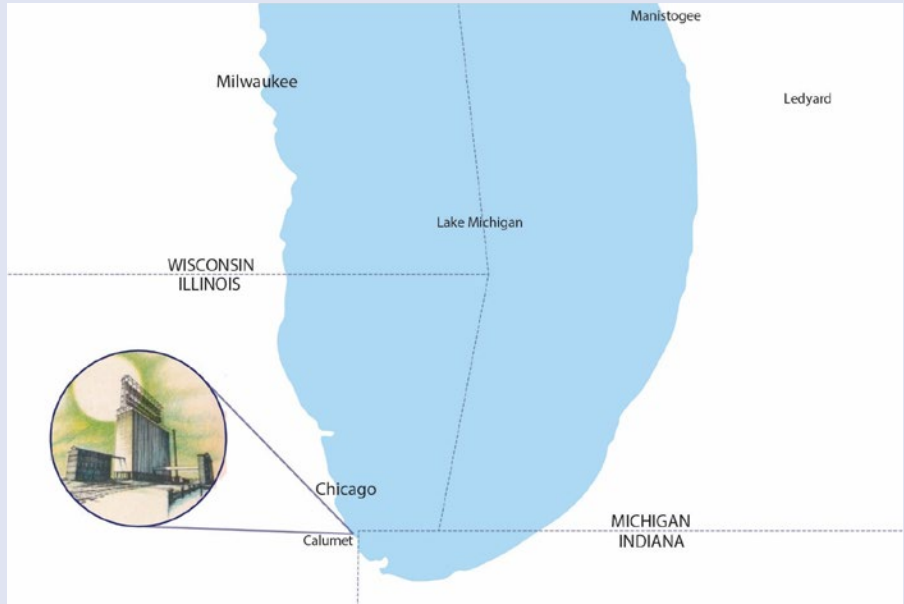
*Calumet “K”* is a grain elevator that must be built by the midnight of December 31, if the grain trading company that commissioned it is to avoid ruin. (The color illustration of the grain elevator above was cropped from an image on the cover of the novel republished in the 1960s.)

### The location

Calumet is a small town in the southern suburbs of Chicago, Illinois. Ledyard, Michigan, a town North East of Calumet and a major material supplier for the project is a day ride away by railroad.

### Historical backdrop

US Steel becomes the first billion-dollar corporation in 1901. Railroads are the dominant mode of surface



transportation. Concrete reinforced with twisted steel reinforcing bars is gaining traction for the construction of major structures such as skyscrapers and bridges. US stock market crashes for the first time in 1901.

### What’s to come

Starting with the September issue of this newsletter, this article provides a front row seat, spanning several issues, to the story of the construction of *Calumet “K,”* and Charlie’s indomitable spirit.

### About the author of this article

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.



## ASCE-NCS Newsletter Patrons



## FGIA transitions Summer Conference to virtual event

Schaumburg, Illinois (April 21, 2020) – The Fenestration and Glazing Industry Alliance (FGIA) will hold its Summer Conference virtually due to the spread of COVID-19 and requests by government leadership to shelter-in-place. This event, previously intended to be held in Chicago, will be hosted on Zoom for the convenience of participants. The event dates remain largely unchanged with the conference taking place Tues., June 23 through Thurs., June 25. Registration for the [virtual Summer Conference](#) will open the week of May 4.

“FGIA will provide the same high-quality industry content that participants have come to expect from our events, only in an online format,” said Janice Yglesias, FGIA Executive Director. “There will be one track, making it easy to connect to the event and know you will be in the right ‘room’ for the sessions.”

As the event gets closer, FGIA staff will announce a blended slate of association business sessions, as well as panel discussions, speakers and other content of most value to those in the industry in these unusual times. Keynote speaker Dan “Danimal” Hampton, a retired Hall



of Fame NFL player for the Chicago Bears, will address the importance of leadership and adapting to change. An overview of the most recent FGIA market study, now in development, also will be given including forecasts for the U.S. fenestration market. Discussions on COVID-19's impact on the industry also will take place including lessons learned, financial relief packages and forecasting of what is to come.

Three or four meeting sessions will be hosted each day beginning at 10 a.m. Central time and concluding in the late

afternoon, with plenty of breaks in between.

“While the format has changed, the quality level will be what participants have come to expect from FGIA,” said Yglesias.

Despite the platform change, networking will still be a part of the conference, as it is with in-person events.

“We know those who come to our world class in-person events love doing so for the networking,” said Yglesias. “To meet this need, FGIA will be hosting optional ‘happy hours’ following Tuesday’s and Wednesday’s content. Meet up in a themed ‘room’ online with up to 10 other participants and enjoy moderator-led discussions of topics you care about most or elect to join a social ‘room’ for general conversation and catching up.”

For more information about FGIA and its activities, visit [fgiaonline.org](http://fgiaonline.org).

*Your trusted industry resource, setting the standards for fenestration and glazing.* ■

### Employment Clearinghouse

**Now Hiring:** You can find the list of companies hiring during the COVID-19 pandemic at [RePicture.com/covid-19DCjobs](http://RePicture.com/covid-19DCjobs). If your company is hiring civil engineers in the Washington, DC area and is not currently on the list, email [jobs@RePicture.com](mailto:jobs@RePicture.com).

*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](#).*

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# ASCE-NCS Committee and Branch News and Updates

## Education Committee – Collegiate

By Jameelah M. Ingram, P.E., M. ASCE

### Encouraging Words from ASCE NCS Student Chapter Presidents.

The National Capital Section is usually teeming with students and their absence is recognizable. As the world works to overcome the coronavirus, students at colleges and universities will be completing their semesters from a distance. Despite these recent challenges, the ASCE NCS Education Committee believes that students, our future engineers, are both nimble and determined! Two students from the National Capital Section shared encouraging updates below:

Bryan Minarczyk, President at the Catholic University of America ASCE Student Chapter (CUA ASCE), wrote:

*After receiving the news from the University, I returned home to New York where I am continuing with online classes and interning remotely. While both have been an adjustment, it is amazing to see how resilient everyone is in adapting under the given circumstances. Faculty members remain committed to student success and look for innovative ways to engage students via online office hours, group projects, and presentations. Though the means and methods have changed, I am confident that I am still being challenged and receiving a great education.*

Lobna Youssef, Co-President at the George Washington University ASCE Student Chapter (GW ASCE), expressed the following:

*Transitioning to online classes has been a strange and new experience. The CEE Department at George Washington has been very accommodating and flexible with this transition to online classes, trying their best to keep their students engaged while maintaining the caliber of our education. Our Dean, John Lach, has been sending frequent updates about new academic policies to help ease this transition, as well as holding town hall meetings to allow students to voice their concerns. Although it is disappointing not to see my classmates every day, the sense of camaraderie and community is still extremely present. We are hoping for the safety and good*

*health of all and looking forward to hopefully resume in-person classes in the fall.*

The ASCE NCS Education Committee also looks forward to the time where we can gather in-person, as an ASCE community once more. Until then, ASCE Collaborate, is an excellent tool for professional and student members to remain connected.

### ASCE NCS Geo-Institute Announces Winner of 2020 Student Essay Contest

(News provided for the Education Committee section by Shana M. Carroll, PE, LEED BD+C, President of ASCE NCS Geo-Institute)

The ASCE NCS Geo-Institute hosted a student essay contest. The topic for this year was **“What is your vision of the future of geotechnical engineering?”** ASCE NCS GI is happy to announce that **Abby Burke** from Virginia Polytechnic Institute and State University has been selected with the best essay. She will receive the prize of USD 1,000 and free attendance for the Annual Geotechnical Symposium in 2021. Please take a moment to read her essay and background below and give her some cheers.



Abby Burke received her undergraduate degree in civil engineering from the University of Kentucky and is currently pursuing her master's degree in geotechnical engineering at Virginia Tech. Her graduate research is funded by the Center for Geotechnical Practice and Research and focuses on potential impact and opportunities within geotechnical practice resulting from climate change. In her free time, Abby enjoys hiking and backpacking in the Blue Ridge Mountains. Abby intends to start a career in geotechnical consulting after graduating in December 2020.

Her essay highlighted how the effects of climate change can provide opportunities for geotechnical engineering.

*“Global change processes are also impacting ecosystem health, especially in coastal regions experiencing rapid sea level rise. In many coastal*

*areas, low marsh plants are transitioning inland as high marsh plants die off due to more frequent inundation. When these ecosystems are damaged, we lose more than an important source of biodiversity. Coastal ecosystems act as a barrier during storm events by dampening storm surge and providing a place for wave breaking. As a result, there is a strong interest in maintaining or expanding these ecosystems as an alternative to traditional gray coastal protective infrastructure. In the future, geotechnical engineers could expand their practice by collaborating with coastal ecologists to implement green or green-gray systems of coastal protective infrastructure.”*

*“There is a strong interest in cutting back on carbon emissions in order to reduce atmospheric warming and ocean acidification. Today, the geotechnical practice relies on Portland cement concrete as a construction material for foundations, dams, ground improvement, and other applications. However, concrete production is an extremely carbon-intensive process: about 410 kg of CO<sub>2</sub> are emitted per cubic meter of concrete produced. To address this problem, geotechnical engineers could take the lead in developing and implementing more sustainable construction materials.”*

*“Geotechnical engineers of the future will need to understand how environmental conditions are changing so that they can be leaders in developing resilient, sustainable communities.” – Abby Burke 2020.*

### Corporate Relations Committee

By Lynn Mayo, RePicture Engineering

Looking for a new job under normal conditions can be stressful. Looking for a new job during the COVID-19 shutdown creates many new challenges.

As many of you know, there are several companies that planned to hire staff in March that have now put all hiring on hold, until the impacts of COVID-19 are better known. However, some companies are going forward with their hiring process during COVID-19.

Unfortunately, it's not always easy to know which companies are suspending hiring and which are going forward

*continued on page 8*

with hiring. Based on my review of hundreds of job postings on dozens of company websites, it appears that many companies, especially smaller and mid-sized companies, have not updated their job postings since the COVID-19 stay-at-home orders. Some local civil engineering company websites have job postings that are several years old!

Therefore, I've created a list of companies that are still hiring civil engineers in the District of Columbia, Virginia, and Maryland. The list includes companies that have posted a new job opening on their website since April 2 (after the area's stay-at-home orders). In addition, the list includes companies that have notified me that they are still hiring.

You can find the list of companies hiring during the COVID-19 pandemic at [RePicture.com/covid19DCjobs](https://RePicture.com/covid19DCjobs). If your company is hiring civil engineers in the Washington, DC area and is not currently on the list, email us at [jobs@RePicture.com](mailto:jobs@RePicture.com) and we'll add your company. Also, please let us know if a company should no longer be on the list for hiring during the COVID-19 pandemic.

During this challenging time, there is reason to be hopeful for those of us in the civil engineering industry. According to the ASCE national website, the CARES Act recently signed into law in response to COVID-19 includes \$25 billion for transit grants, \$1 billion for Amtrak, \$10 billion for the Airport Improvement Program, \$56 million for the Essential Air Service and a provision that [unlocks the Harbor Maintenance Trust Fund](#) which helps ports that need dredging work.

Hopefully all companies will soon be back to normal hiring practices. In the meantime, let's come together and help each other by sharing available job opportunities.



### Younger Members Forum

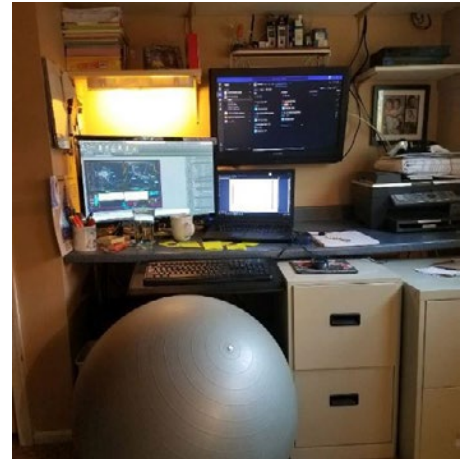
By Sarah Shay, YMF Secretary/Newsletter **Monthly Happy Hour.** The YMF hopes that all ASCE-NCS members and their loved ones are staying safe and healthy this month! To celebrate the shift from office work environments to mostly working from home, the YMF Executive Board has shared some of their new home office setups!



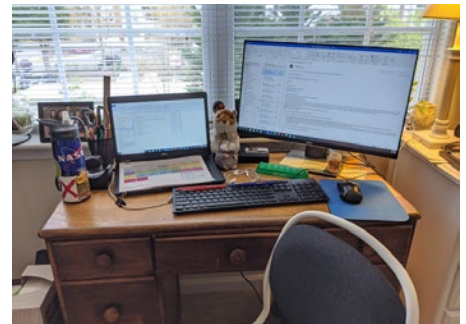
From Ariana White, Vice President



From Amanda Frosztega, Co-Social Chair



From Joseph Whartenby, President



From Sarah Shay, Secretary

**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), connecting with us on LinkedIn (ASCE National Capital YMF), and following us on 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](#).

### Geo-Institute - National Capital Chapter

By Shana Carroll

Please be advised the March 19th luncheon has been cancelled due to the coronavirus pandemic. If you have already registered and paid, refunds have been processed.

This presentation has been rescheduled to May 13th (12pm - 1pm) as a webinar. The cost is \$30 per connection. The

person who registers at each office will be responsible to send in a completed sign-in sheet within 1 hour of seminar ending for participants to receive their PDH credit. [Click here to register](#). Dial in instructions will be sent one week prior to the webinar.

### Emergency Rock Slide Stabilization with Shear Pins: Design, Construction, the Media

The presentation will cover the emergency response to stabilize a massive rock slide in Central Pennsylvania that was endangering a shopping plaza, a gas line, and electrical utilities located at its toe (see picture below). The presentation will cover the design and construction of the remediation using shear pins (uncased micropiles). The project received significant media attention due to the eminent threat it represented.

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The positive and negative aspects of the media's role in the project will be highlighted.

*About the speaker:* Sebastian Lobo-Guerrero Ph.D., P.E., is a Project Manager/AAP laboratory manager at American Geotechnical and Environmental Services. (A.G.E.S.) at the Pittsburgh, Pa., headquarters. He has more than 18 years of experience in geotechnical engineering and has authored more than 60 technical papers published in scientific journals, geotechnical magazines, and conference proceedings worldwide. He was a co-author (and instructor) of the Delaware Department of Transportation 2016 LRFD Bridge Design Manual. He is a former chair of the Pittsburgh G-I chapter, and a former Director of the ASCE Pittsburgh Section. He is also a member of the DFI Tiebacks and Soil Nailing Committee, and the chair for the DFI-45 National Conference in National Harbor MD 2020.



### Construction Committee

By Ivan Carrasco

Shane Yanagisawa, Project Director-Salini-Impregilo/Healy JV informed that the Northeast Boundary Tunnel Boring Machine holed through at the W Street



Shaft on April 8 on line and grade. A phenomenal feat of surveying coming off a 150 ft. baseline and advancing 16,000 ft without any intermediate shafts to check line. It is an impressive feat that the crews continued to work to get the job done with the current pandemic situation and we are happy to report that the crew is healthy.

### EWRI Committee

By Ken Klewicki

The EWRI NCS chapter is planning on hosting a monthly webinar series beginning in late May or early June. Watch your emails for further details or contact Ken Klewicki at [Klewicki\\_Joseph@bah.com](mailto:Klewicki_Joseph@bah.com) or 571-277-4920 for more information.

### Sustainability Committee

by Alex Rosenheim

ASCE's new course "Making the Case for Sustainable Infrastructure" is

a 6 week guided online course with online, on-demand videos and activities. <https://www.asce.org/making-the-case-for-sustainable-infrastructure/>

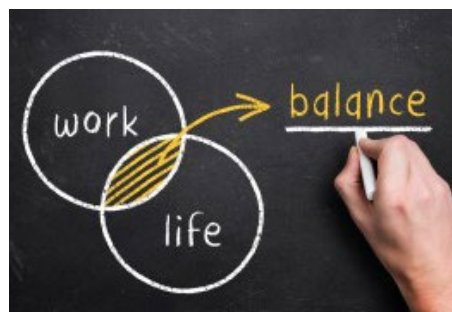
The course launched Monday, April 27, but registration will stay open through May 9 (two weeks into the 6 week course). The videos and activities are released weekly and are on-demand, so anyone joining through May 9 will be able to catch up with the others. The course requires about 2 hours per week, again, on demand to fit into your schedule.

This course is ASCE's first course to address "making the case" for infrastructure: it follows our extensive efforts to recognize and promote sustainability in the industry. ASCE recognizes the leading role civil engineers have in planning, designing, building, and ensuring a sustainable future by providing the bridge between science and society. In this role, engineers actively promote and participate in multidisciplinary teams with other professionals, such as ecologists, economists, and sociologists, and work with communities to effectively address the issues and challenges of sustainable development. The knowledge gained throughout this course will enable you to secure support for sustainable thinking and resilient infrastructure. ■

## A Telecommuter's Guide to Work-Life Balance

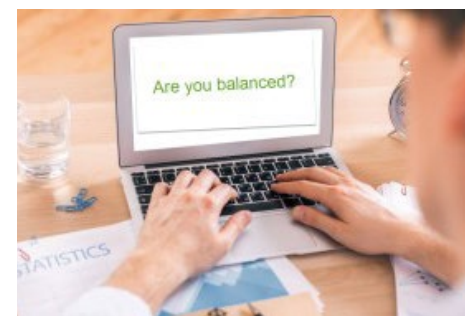
By Shana Carroll

Do you telecommute? I often talk to young professionals who want to have a more flexible work schedule. In one recent study, 75% of millennials polled by Deloitte would like to work from home more. There are different reasons workers want to report from a home office. Some people believe they are more productive when working from home. Others desire a more flexible schedule, or to save time and money



on their daily commute. While working from home may seem easier, balancing your personal life with a "9 to 5" schedule can actually be more difficult than if you report to a traditional office building.

If you love your work, and become adept at telecommuting, you are likely to find it difficult to leave work at the "office," when you should be spending time with friends or family. It is easy to work extra hours in the evening, or on weekends, when your office is so accessible. For example, I work with engineers, estimators, and project managers within my company and many different types of external clients every day. I love my work and enjoy helping people solve their problems. I want to be a responsive team player so much that I often find myself sitting at the kitchen table after dinner with a laptop, writing emails



or preparing spreadsheets. While this is great for my company and my business relationships, the relationships in my personal life suffer.

One of the widely known benefits to working from home is the ability to better balance work and family. However, just like working from a traditional office, your work-life balance can be

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negatively affected. Two recommendations to maintain a work-life balance are to use a separate physical space for your home office, and use timers for your work.

### **Divide your office from the rest of your house:**

If you have a room dedicated as your office, and only work when you are in that space, it will be easier to “turn off” when you need to. Consider the doorway to your office to be a boundary. Once you’ve set this boundary, it becomes easier to leave work at the office and focus on other aspects of your life. This isn’t to say that you should never work outside of your typical work hours. On the contrary, because your brain is not wired to generate great ideas only during the work day, you may find that you want to send an email or work on a project on a weekend. When this happens, simply walk to your office and complete the task. If, like me, you allow yourself to work in different parts of the house, you run the risk of getting caught up in work and spending more time than you allotted. Last weekend, for example, my goal was to spend Saturday morning gardening. As I brewed the morning’s coffee, however, I had an idea about how to make a project design better so I opened the laptop, and started working. Three hours later, there I was sitting on the couch working through a company presentation (that had nothing to do with the initial reason I turned on the computer) instead of working on my garden. In comparison, if I had walked to my office to do the work, I likely would have completed the single

task I had an idea for, and then started gardening earlier in the day.

### **Set timers for your work:**

Even if you are able to abide by the boundary you set between your office and the rest of your home, you will likely find yourself putting in extra hours when you work from a home office. A 2010 study by Brigham Young University claims that telecommuters can work, on average, 19 more hours (as compared to employees who work at an office daily) before a work/life conflict occurs. However, these conflicts still occur and if you don’t set limits on your work time, they can cause havoc in your life.

One study has shown that if you are happy with your job on a day-to-day basis, you are more productive. While an increase in number of hours worked was not analyzed in this study, it is intuitive that the more you like your job the more hours you want to put in. This can be a dangerous position, however, as the more hours you spend working, the less time you have for family and home life. For many of us, the problem is that we love what we do for a living so much that we get caught up in the task we are working on and time seems to fast-forward.

### **Time flies never to be recalled.**

– Virgil

How often have you finished working on one thing, and then, instead of turning off the computer, you start working on something else because you want to

cross it off some list? Soon after, you realize you’ve spent too many hours working and something slipped in your home life. The result is that you become more vigilant with your time, for a short while, and within a few weeks, you find the cycle repeats. Rather than continue this way, schedule your time and use accountability tools to be sure you stick to the schedule. For example, if you have a report you’d like to review, set a stopwatch for the anticipated amount of time you need. Once the timer ends, stop working. I prefer to use the timer function on my iPhone. However, if you are easily distracted by having your phone nearby, try a virtual timer. One that I like is the Tomato Timer, which solely operates in 25 minute increments based on the Pomodoro method of time management. Another option is to use a friend or family member as your accountability tool. You can schedule an activity with them so that you have no choice but to put your work down, or you can let them know that you would like to be interrupted in X minutes and ask that they call at that time. Remember, there will always be “one more thing” that you can, and probably want to, finish; to keep a work-life balance, set a timer and abide by it.

When you work from a home office, it can be easy to neglect your home life. Two ways you can help avoid this unbalance are to use a separate physical space for your home office, and use timers for your work. By keeping this balance, you will go to sleep knowing that you’ve given adequate care and attention to all aspects of your life. ■

## Updates from National ASCE

Updated: April 29, 2020 at 11:52 a.m. EDT

In response to the global outbreak of the coronavirus (COVID-19), ASCE is committed to reducing the risk of adverse health impacts to the thousands of ASCE members, guests and staff that participate in numerous ASCE

committee meetings, conferences and events. In addition to urging that business be conducted via teleconference or videoconference whenever possible, we have reviewed and updated our event policies and procedures. The following

information will be updated as events warrant – always with the health and safety of our event attendees, exhibitors and staff as our top priority. ■

Impact of Coronavirus on Scheduled National ASCE Programs		
Event	Schedule Date	Status
<a href="#">Jack E. Leisch Fellowship</a>	2020–2021	Cancelled
<a href="#">ASCE Week Orlando</a>	March 22–27, 2020	Cancelled
<a href="#">Offshore Technology Conference Asia</a>	March 24–27, 2020	Postponed   August 17–19, 2020
<a href="#">Younger Member Leadership Symposia Alumni Summit</a>	March 27–29, 2020	Cancelled
<a href="#">All ASCE Student Conferences and Society-Wide Final Competitions</a>	Multiple Dates in April 2020	Cancelled
<a href="#">Continuing Education Seminars</a>	Multiple Dates in April and May 2020	Cancelled
<a href="#">AEI FORUM</a>	April 1–3, 2020	Cancelled
<a href="#">AEI International Student Design Competition</a>	April 2, 2020	Virtual Offering   April 2, 2020
<a href="#">SEI Structures Congress</a>	April 5–8, 2020	Virtual Offering   April 7, 2020
<a href="#">Earth &amp; Space Conference</a>	April 20–23, 2020	Cancelled
<a href="#">ASCE OTC Hall of Fame Gala</a>	May 5, 2020	Cancelled
<a href="#">EWRI Congress</a>	May 17–21, 2020	Cancelled
<a href="#">Watershed Management Congress</a>	May 20–21, 2020	Cancelled
<a href="#">EMI/PMC Conference</a>	May 26–29, 2020	Postponed   May 25–28, 2021
<a href="#">ASCE International Conference on Transportation &amp; Development</a>	May 26–29, 2020	Cancelled
<a href="#">UESI Surveying &amp; Geomatics Conference</a>	May 31–June 2, 2020	Postponed   TBD, 2021
<a href="#">National Concrete Canoe Competition</a>	June 13–15, 2020	Cancelled
<a href="#">LTPP Data Analysis Contest</a>	July 1, 2020	Postponed   September 1, 2020