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The ASHE Potomac Section Newsletter

President's Message

Dear ASHE Potomac,

If we lived in a utopia, it would be very, very difficult to make this world a better place. Unfortunately, we don't live in such a world and opportunities abound for us all.

For me, ASHE is one of my volunteer activities and how I give back to my profession. I'm proud of the profession. Safe convenient transportation is one element where I can contribute to society and the well being of my neighbors.



Charlie O'Connell, P.E.
"I wear my mask to protect you."

I also believe we should do volunteer work in our personal life. I have great respect for those people who are doing things to help the homeless, deliver meals to families in need, stand outside in the cold to help the Health Department staff as they deal with lines of cars and the people wanting to be tested. The simple act of giving blood or wearing a mask helps. I wear my mask to keep you safe.

At thanksgiving, it was amazing to me that intensive care units were full and so were our airport terminals. You don't need me to remind you of the upsurge in cases and the 15,000 deaths in the USA this week. But that's like 75 Boeing 727's crashing in a week. We shouldn't tolerate such numbers.

As we go about this holiday season consider your blessings and look for ways to be kind to our fellow man and make this world a better place. The Potomac Section (YOU) will be supporting Toys for Tots with a \$2000 check.

Please be smart, wear your mask, stay safe.

My very best regards,

Charlie O'Connell, P.E.
President, ASHE Potomac
Section

Stephen M. Evans Memorial Scholarship



Up to three \$2,000 in SCHOLARSHIP(S)

AVAILABLE FOR STUDENTS PURSUING B.S. DEGREES IN CIVIL ENGINEERING OR TRANSPORTATION RELATED FIELDS

Applicants must be an undergraduate student entering their junior or senior year, enrolled in an ABET-accredited engineering program majoring in Civil Engineering. Applicants must have an interest in transportation related engineering fields, a minimum overall GPA of 2.75 on a 4.0 Scale, and a minimum 3.0 GPA in their engineering-related course work.

These Scholarships are from the Potomac Section of The American Society of Highway Engineers (ASHE). The Potomac Section is based in Northern Virginia with members from across the Washington DC metro area.

ESSAY

Applicants must prepare an essay of at least 500 words describing the following:

- How the applicant became interested in engineering.
- The applicant's personal goals as they pertain to Transportation Engineering.
- The contributions the applicant hopes to make to the transportation industry.

SUBMISSION

- Essay
- Official Transcript*
- Resume

Submit applications to:

Khatereh Vaghefi

Khatereh.vaghefi@gmail.com

Subject: ASHE Scholarship Application

Questions?: 703-742-5720

*An unofficial transcript is acceptable for the 3/19/21 submission, but an official transcript will be required if the candidate is selected to receive a scholarship.

CANDIDATE SELECTION

Members of Potomac Section ASHE will evaluate the submissions. Winner(s) will be invited to attend the June 9th, 2021 ASHE meeting for presentation of award(s). Good Luck!

Application Deadline
March 19, 2021

UPCOMING EVENTS



Golf Tournament

To Benefit the Stephen M. Evans Memorial Scholarship

FRIDAY, May 21st

Bull Run Golf Club

3520 James Madison Highway, Haymarket, VA 20169

- Registration begins at 12:00 noon with a box lunch
- Driving Range available prior to the event
- Four person/captain's choice modified shotgun at 1:00 p.m.
- Awards dinner (BBQ) following the tournament
- Prizes will be awarded for closest to the pin and longest drive, and to the 1st, 2nd, and 3rd place teams
- Raffle tickets will be sold for great prizes!
- Cost: \$90 per golfer; \$360 per foursome (Includes green fees, cart, range balls, a box lunch, refreshments and dinner)

Register by May 7, 2021 !



Sign Up & Get More Info at: www.potomac.ashe.pro/events

If you are interested in volunteering to support the Golf Tournament, please reach out to Erin Beckman at: ebeckman@rkk.com

Upcoming ASHE Events

- February 3rd — Monthly Meeting, I-66 Transformation – Aerial Videogeography
- March 10th — Monthly Meeting, TBD
- April 14th — Monthly Meeting, TBD
- May 21st — ASHE Golf Tournament, Bull Run Golf Club
- June 7th – 11th — ASHE Virtual National Conference, Pocono Mountains of Pennsylvania.
- June 9th — Monthly Meeting, TBD
- Date TBD — Summer Field Trip, Location TBD

Save the dates!



Business Roundtable – Perspectives During COVID 19 Pandemic

September 2020 Virtual Meeting

For years, the ASHE Potomac Section dinner meetings have brought members and friends together once a month to network and learn from one another. Everyone cherished those evenings away from the office where friendships budded and plans for the future were made. This year brought a wave of changes and we are now confined to meeting in cyberspaces and changed the way we work and network.

The first meeting of the 2020-2021 season was held in a virtual space on 9/16/2020 and we heard member's voices. Five of our Gold Sponsors sent representatives to the podium to tell us how their firms were affected during the pandemic, how they were supporting their clients and their employees.

During the first few months of the pandemic, dealing with IT technology, learning to navigate virtual meetings and communicate the company status to employees were the biggest challenges for all firms. Other challenges included providing safety equipment and policies for field staff and providing support to all new hires and interns who started their jobs at the beginning of summer.

Working from home came with challenges for some employees who needed to develop new methods and ways to balance work and life. All firms implemented flexible working hours, organized periodic virtual happy hours and communicated the status of the company on a regular basis.

What does the future look like?

- There are still so many unknowns and unanswered questions but what we know for sure is that the 2020 crisis changed the way we think of work forever.
- This period of mandatory isolation proved that working remotely may be a solution to relocations, long commute times and lack of competent consultants in certain remote areas. Many industries have already been adapting to the new normal and perhaps having agile office spaces and telework is in the future of our industry too.
- We braved the change; however, we admit that we missed meeting our members in person during our dinner meetings and we hope that this change will not persist for too long in the future.

Panelists:

David Hieber (JMT),
Erin Donovan (T3),
Mo Kim (RDA),
Robert Morris (WSP),
Young Ho Chang (ATCS)



October 2020 Virtual Meeting VDOT NOVA District Conversation (Placeholder)

Our collaboration with VDOT continues and on October 21st, 2020, ASHE Potomac held the annual VDOT/NOVA District event virtually.

Helen Cuervo, the VDOT NOVA District Administrator, opened the presentation with the “State of the District” and ongoing efforts of district staff to accommodate the changes due to COVID-19 while maintaining all operations on-going and keep Virginia moving.

Bill Cuttler, District Construction Engineer, gave an update of VDOT construction performance to finish projects on time and on budget. He highlighted a few exceptional projects in northern Virginia (VA) including:

- Jones Branch Connector Bridge in Tysons,
- Lynn St Esplanade in Rosslyn,
- I-66 Inside the Beltway W&OD Trail Bridge,
- Rte.7 Widening Reston to Tysons, and
- Rte. 7 Battlefield Interchange in Leesburg.

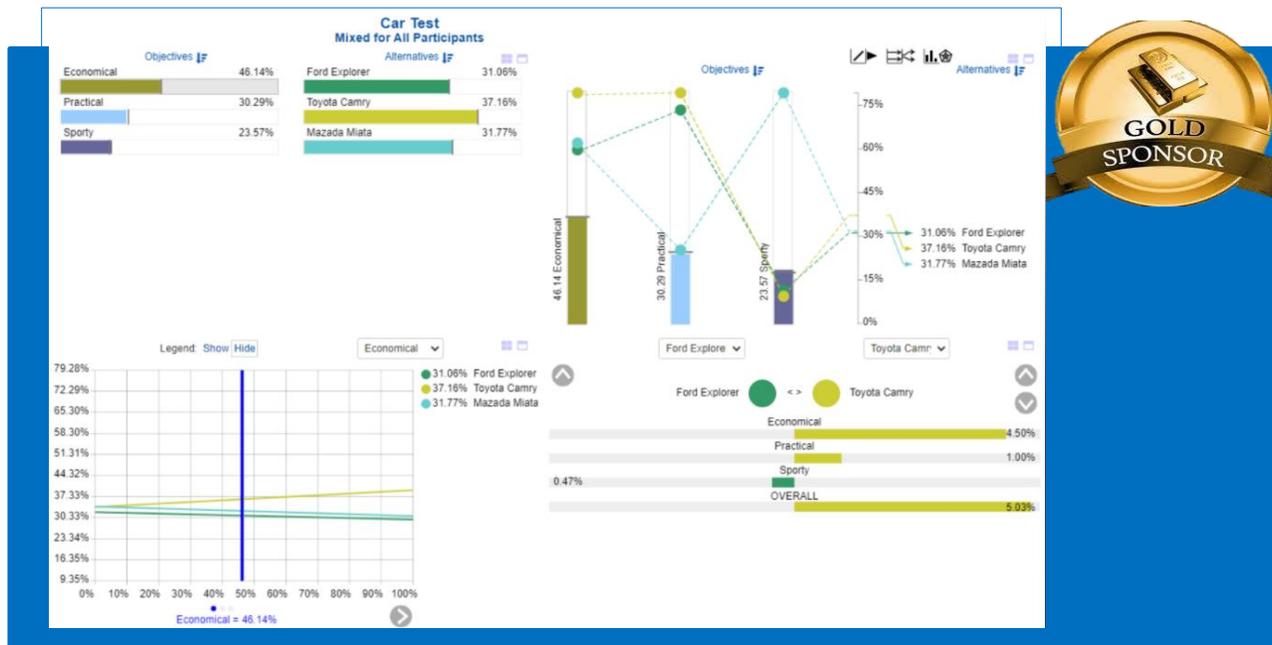
Nick Roper, Assistant District Administration for Project Development gave an update on Dashboard Performance metrics and cost estimating and bidding process.

Susan Shaw, Megaprojects Director presented an update on the construction progress of I-66 Outside the Beltway Project and 495 NEXT public hearing and pursuit.

Lauren Mollerup, NOVA District Maintenance Engineer, presented a comprehensive review of pavement and structure maintenance in the district.

Kamal Suliman, Regional Operations Director of NOVA District, discussed the impact of COVID-19 on traffic trends in northern VA. He also gave an update on the extended lane closure hours for contractors as a result of COVID and stay at home orders.

All presentations are on our website at www.potomac.ashe.pro



November 2020 Meeting Recap Using Analytical Hierarchy Process (AHP) for Fun and Profit

**David Metcalf, PE,
PTOE**
PRIME AE Group

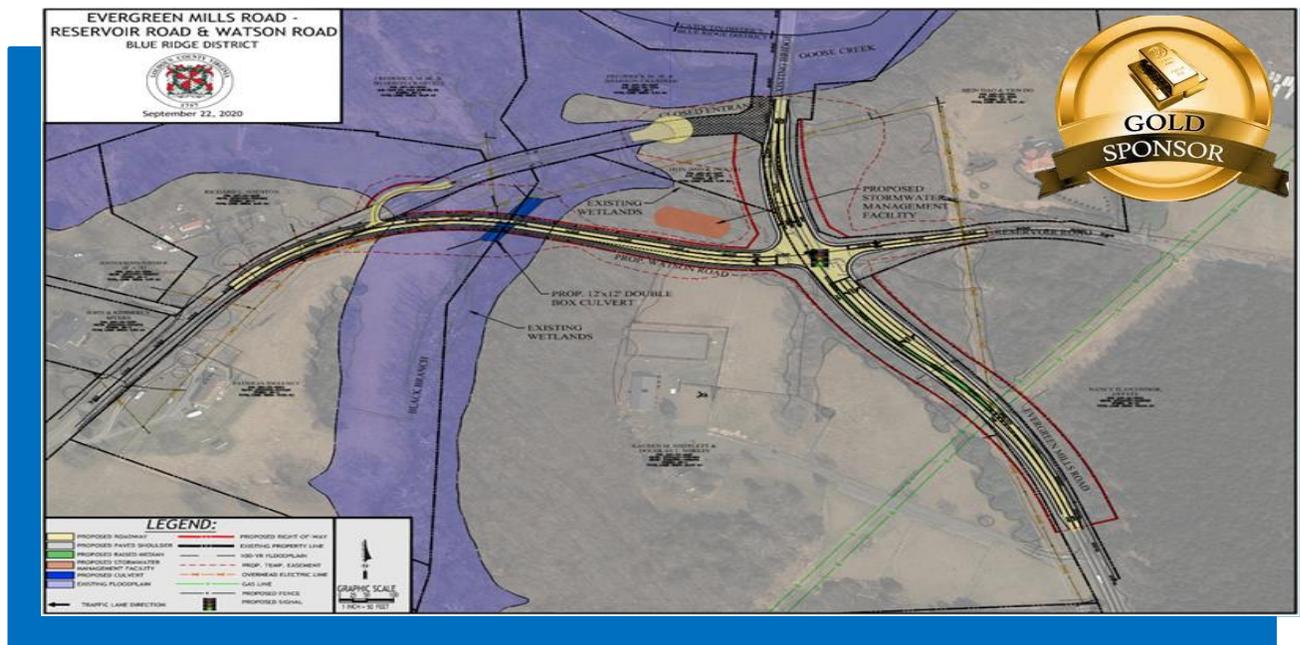
Analytical Hierarchy Process (AHP) is a decision-making process used widely by business and government. However, the process is not often used by engineers, nor is it taught in Civil Engineering curriculum. By following the thorough and objective AHP process stakeholders better understand the issues, the engineer's credibility is enhanced, and an optimal decision can be reached.

The AHP process establishes an overall goal and criteria to evaluate alternatives relative to the goal. Each criteria are judged in a pairwise manner and the comparisons are processed mathematically and scores for each criteria are developed. Next, alternatives are developed and scored in a pairwise manner relative to each of the criteria. The process is very effective with a small group of stakeholders guided by a facilitator. Several computerized programs are available to facilitate the process and perform the scoring calculations.

Applications of the process include:

- Alternatives Analysis
 - Traffic Level of Service
 - Residential Impacts
 - Construction Costs
 - Impacts to Environmental Resources...;
- Establish Benefit – Cost ratios
- Population and Economic Projections

This presentation showed a simple example of how the process works, and several examples of how it has been applied in Civil Engineering. A brief explanation of the linear algebra behind the scoring was provided for the mathematically inclined. Finally, the group went through an example of an imaginary highway location study.



November 2020 Meeting Recap

Evergreen Mills Road Improvements at Watson Road and Reservoir Road

Ian J. Cathcart, PE
J2 Engineers, Inc.

Loudoun County DTCl engaged J2 Engineers to provide engineering services for the design and construction of a realignment of Evergreen Mills Road, Watson Road, and Reservoir Road to develop a solution to improve safety along the corridor. The high number of crashes at this location are a result of the various geometric deficiencies and high speed of travelers. Several mitigation measures have been implemented in recent years, including rumble strips, flashing speed advisory signs, and an advanced collision warning system.

Existing conditions:

- The speed limit of 55 mph, far exceeds the design speed for the existing geometric conditions,
- Inadequate sight distance for vehicles emerging from Watson Rd and Reservoir Road,
- Inadequate lane/shoulder widths.



Alternatives studied:

✦ Various horizontal realignment options ✦ Various intersection types ✦ Roundabout.

The selected alternative will realign Watson and Reservoir Roads to meet at a traditional 4-way intersection that will include a new signal and dedicated turn lanes. Adding turn lanes alleviates one of the major crash causes. The project will also include 8' wide, full depth shoulders to provide additional space for vehicles to maneuver in case objects or animals are in their path – another cause of several recorded accidents at the intersection.

Ultimately, Evergreen Mills Road will also be widened to a full 4-lane, median divided roadway with closed drainage, curb and gutter, and shared use paths on both sides of the road. This project will provide space for this ultimate condition to reduce the amount of reconstruction needed *down the road*.



Final design and approval is expected to be completed later in 2021, with the project scheduled to go to construction in 2023.



November 2020 Meeting Recap

Arlington National Cemetery Southern Expansion – Defense Access Road Project

A team of professionals from Kimley Horn shared the technical aspects of their solution to the Defense Access Road (DAR) project.

John Martin, PE
Ted DeLio, PE
Alayna Bigalbal
Tommy Cook
Mark Phillips
Kimley Horn

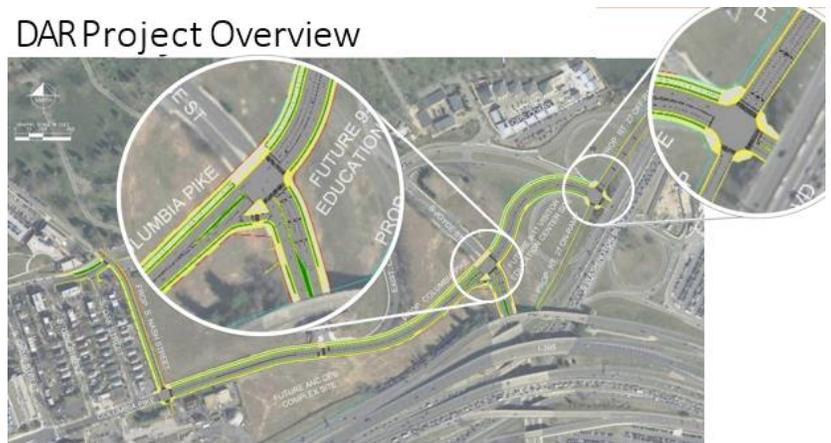


The purpose of the project is the realignment and reconfiguration of streets and sidewalks to allow for the expansion of contiguous interment space for Arlington National Cemetery (ANC). One of the goals of the project is to recognize the national importance of the project site and to integrate the Air Force Memorial seamlessly into the expanded ANC grounds.

Project elements

- Realignment of Columbia Pike and S. Joyce Street
- Replacement of Southgate Road with a new segment of S. Nash Street—including expansion of Foxcroft Heights Park
- Modification of the Columbia Pike/Washington Boulevard interchange
- Relocation of multiple utilities
- Grading for connection to future Cemetery Wall Trail (between Columbia Pike and Memorial Avenue)
- Construction of ped and bicycle facilities
- Construction of street lighting to enhance safety
- Maintenance of safe multimodal access to the Air Force Memorial
- Construction of driveway entrances for future Pentagon 9/11 Memorial Visitor Education Center (VEC)
- Adjustment of Limited Access Control along Route 27 and I-395

DAR Project Overview



December 2020 Holiday Event

BINGO Game

Ugly Sweater Contest

Networking

Fourteen ASHE Members joined us for a Bingo game, ugly sweater contest and networking on December 11th . Not many engineers will miss a game with numbers and tough competition! The winners “took home” Gift Cards, just in time for the Holiday Season.

BINGO Winners:
Jesse Glasser,
Shireen Gharangik
Khatereh Vaghefi
Erin Beckman

Ugly Sweater Contest Winners:
Amy Morris/Jason Cawrse (Tie)

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Participants 14 Chat 1 Share Screen Reactions Leave

Professional Development Corner

Manuals and Standards Updates (links)

- [VDOT Procurement & Management of Professional Services - January 1, 2021](#)
- [IIM-LD-110 \(GENERAL NOTES\)](#)

Professional Development Tips

Keep learning – keeping up with the latest engineering trends is paramount to success. Be a lifelong learner by taking new training courses, webinars, certifications, and reading the latest research (TRB Annual Meeting is taking place this month).

Get a Mentor – identify someone who you respect, has similar interests to yours and has accomplished what you wish to accomplish. Meeting with your mentor on a regular basis and sharing experiences and developing plans of action for your improvement are a few steps you can begin your relationship.

Keep Building your Network – even more so during virtual meetings. Take advantage and nurture existing relationships. Also build new ones, reach out to people and organize events that benefit you both.

Networking within ASHE Potomac Members

Sai Venkateswarlu and David Metcalf (Past President) took to the Potomac (literally) in a recent race held in the Flying Scot class. They finished in the top the fleet and they are planning a campaign for next Spring. Stay tuned!



A puzzle for snow days:

A 25 ft ladder (assume it is not an extension ladder) is placed with its foot 7 ft away from a building. If the top of the ladder slips down 4 ft, how many feet will the bottom slide out?

(The answer will be provided during our February meeting.)

Moving to On-Line Professional Development Hours (PDH)

Certificates by Paul Hoffman, Director 2018-21

The American Society of Highway Engineers (ASHE) Potomac Section offers its members opportunities for local presentations that can update and broaden the attendees' knowledge of the field and in doing so, provide for the issuance of professional development certificates. Dinner meetings were held in February and March 2020 with excellent attendance and elevated requests for PDH's.

Early March saw Virginia's first positive Covid-19 test. The March ASHE (in-person) Meeting was held on the 11th and Fairfax County declared an emergency on March 23rd. The ASHE Board cancelled the April Meeting and looked to move to a virtual meeting format – but how? Presentations could be moved on-line once a suitable provider was identified, but needing to offer PDH's, primarily done through handouts at meetings had to be moved on-line too. With the help of some very skilled Directors, the first virtual meeting was held on Zoom in June and the electronic PDH Request Form was emailed to every registered guest. Now the PDH Form would be filled out using Acrobat Pro or Acrobat Reader. Instructions for signing the completed form were provided. Subsequent meetings were held in June and throughout the fall following a typical ASHE Potomac schedule.

PDH requests and certificates maintained a similar ratio to attendees with previous years, at approximately 40-percent, but attendance in 2020 lagged compared to previous years. This was mostly due to one less programmed meeting. Well, hey it's 2020 - what did you expect! Anyway, the Potomac Section is set to continue virtual meetings in 2021 and issuing PDH Certificate in support of it's professional members. If and when we return to in-person meetings it was good that the on-line form was developed for convenience to members and conservation. See you on Zoom or at that meeting.

Opportunities for free classes/events that give PDH hours

[\(click to follow link to PDH Library\)](#)

ASCE adopted New Code of Ethics in October 2020

[\(click to follow link to Code of Ethics | ASCE\)](#)



American Society of Highway Engineers

Potomac Section

www.potomac.ashe.pro



CERTIFICATE *of* COMPLETION



2021 ASHE NATIONAL PROJECT of the YEAR Call for Entries

ASHE National will recognize the outstanding work completed by members of the ASHE with the National Project of the Year Award. Projects submitted must be directly related to a field of transportation. Examples of eligible types of projects are shown in the pictures in this flyer and include highways, bridges, traffic signals, railroads, public transit and bikeways.

One project will be selected for an ASHE National Project of the Year in the \$20 million and under category and the Over \$20 million category. Awards will be presented to the owner, designer, and contractor in each category for recognition of excellence in the judging criteria listed below. The winning teams will receive:

- Awards to be presented to the Owner, Designer, and the Prime Contractor at the ASHE National Conference
- An article written by the winning team about the project will be placed in the ASHE Scanner
- A photo with the name of the project and the names of the design firm, contractor, and owner will be included in the ASHE National Conference brochure and website
- Free admission to the Luncheon honoring Past Presidents for up to three representatives from the winning team in each award category. All teams submitting a Project of the Year application that meet the entry requirements will be provided the opportunity to display an exhibit about their project on a 30" x 30" board at the Luncheon honoring Past Presidents at the ASHE National Conference.

2020 NATIONAL PROJECT OF THE YEAR WINNERS



SR82—Continuous Flow Intersection Over \$20M Winner

Owner: Florida Department of Transportation
Engineer: Dewberry Engineers, Inc.
Contractor: Ajax Paving Industries, LLC

All ASHE Sections are encouraged to submit eligible projects to their ASHE Region for evaluation and advancement to the National Project of the Year Awards Competition. Regions must submit one project in each category to the National Project of the Year Committee Chair by February 28, 2021.

The National Project of the Year Award winners will be contacted by March 30, 2021 and awards will be presented to the winning teams at the Luncheon honoring Past Presidents at the National Conference. Projects submitted for the National Project of the Year Award Competition will be judged using the following criteria:



Route 30 Landslide Remediation Under \$20M Winner

Owner: Pennsylvania Department of Transportation
Engineer: Gannett Fleming, Inc.
Contractor: Golden Triangle Construction

- 25% Complexity
- 25% New application of Existing Techniques / Originality / Innovation
- 15% Social/Economic Considerations
- 15% Safety
- 10% Aesthetics and Sustainable Features
- 10% Meeting and Exceeding Owner's/Client's Needs

For further information please visit the ASHE National website at www.ashe.pro for the submission requirements and entry form or contact:

Joseph Rikk at Gannett Fleming: 614-581-5100 • jrikk@gfnet.com

Thank You Gold Sponsors!



*To Renew or Begin as a Gold Sponsor
Please Contact Jason Cawrse
at Jason.Cawrse@jacobs.com
or 703-376-5375*