

Rehabilitation of the Arlington Memorial Bridge

Lawrence "Larry" Lee, an engineer-historian with the Historic American Engineering Record

The National Park Service (NPS), in cooperation with the Federal Highway Administration, is proposing to rehabilitate the Arlington Memorial Bridge (AMB). This historic bridge is an impor-

The bridge has not undergone a major rehabilitation in many years. Several temporary repairs have kept it operational to meet the needs of the traveling public. However, like many other older

highway bridges across the nation, this bridge needs comprehensive repair to ensure service for the decades to come.

history and development of engineering and technology, with emphases on transportation, technological evolution, and the nature of engineering thought and practice.

He is a fellow of the American Society of Mechanical Engineers and a member of the society's Committee on History and Heritage, having served three terms as its chair. Larry is also the HAER Liaison to ASCE's History and Heritage Committee.



The AMB opens wide.

tant element of the George Washington Memorial Parkway and the transportation network of the Washington, D.C. area in meeting the needs of the traveling public.

The AMB was designed by the firm of McKim, Mead & White, and opened on January 16, 1932. The lead architect, William Mitchell Kendall, designed a bridge 2,163 feet (659 m) long; low in profile with nine broad neoclassical arches; and a very unique Chicago-type, two-leaf bascule draw span with no structure whatsoever above the deck. Except for the steel trusses in the draw span, the bridge is of reinforced concrete construction faced with dressed North Carolina granite ashlar. At the time it opened, the AMB bascule span was the longest, heaviest (3,000 short tons (2,700 metric tons)), and fastest-opening bascule span in the world. The draw span last opened in the early 1960s. It was deactivated in 1965.

ments classic and endangered engineering artifacts. He has been leading a Level 1 HAER documentation project for the AMB, which will be completed in 2014. Through this effort, he became very familiar with the bridge's history, engineering significance, and condition. Of particular interest is the bascule span, which, due to the superb engineering that allowed this span to essentially remain invisible and blend in with the rest of the bridge's monumental aesthetics, may end up leading to its destruction. Larry will provide us an overview of the HAER, the history of and current conditions of the AMB, with insights into the NPS plans for the bridge's rehabilitation.

Larry Lee is a mechanical engineer and technology historian. After over 20 years as an engineer in several industries (including rail transportation, design, environmental consulting, manufacturing, and control systems), Lee completed graduate study in the history of technology and refocused his career on the

Join us for what promises to be a fascinating presentation on **Tuesday, May 20**, at the Hilton Arlington, 950 North Stafford Street, Arlington, VA, on the second floor in the Gallery Ballrooms.

Parking is available at the hotel (\$8), at the Ballston Mall garage (\$1 after 6 p.m.), and on the street (free after 6 p.m.). The Hilton is on the same block as the Ballston Station on Metro's Orange Line. Registration and networking will be from 6-6:45 p.m., followed by dinner. The program will end by 8:30 p.m. The cost is \$45 for those preregistering, \$10 for students, and \$55 for walk-ins, as space allows.

Please register by May 14. Click [HERE](#) to register. One Professional Development Hour is available to attendees. For questions, please contact Ranjit Sahai at president@asce-ncs.org or 703-994-4849.

Please Note: No-shows will be charged the full registration fee. We welcome walk-ins, including any registrations made after the guaranteed number of guests is provided to the hotel. However, the cost for walk-ins is higher because the Section is charged accordingly by the hotel for late registrations.

President's Corner

This issue of our newsletter marks the beginning of the June-August summer break when the National Capital Section (NCS) Board of Directors (Board) comes together to plan next year's Section activities and dinner meeting topics. The Board's Planning Meeting will be held on July 15; if you're interested in observing or otherwise taking part in the planning process, e-mail me (president@asce-ncs.org) so you can be added to the list of those outside the Board who receive an invitation.



From the October issue of this newsletter through the April issue, we have run a **Board Member Feature** where Fernando Pons, Sara Guererro, L.J. Sauter, John Casana, Chris Manalo, and Dean Westman shared their perspectives on what it has meant to them to be a member of the NCS

Board. The universal theme from their feedback was "personal and professional development." The specific themes that each focused on for development however were unique:

- giving back to community and profession;
- writing in a way that engages the reader;
- exposure to fiscal management;
- broadening of horizons;
- lasting friendships;
- and sense of pride in serving the needs of fellow professionals, among others.

Before Michaela Wittmann delivered our April Sustainability Keynote address, I had an opportunity to ask her what inspired her journey in sustainability. Her response alluded to an existing passion for the topic, a spark from a sustainability conference, and the lasting industry connections she developed.

(See April Meeting Recap, page 4.)

We at the NCS are delighted to host events and conduct activities that provide such a forum from which our members can grow.

Our May Section Meeting will focus on the Arlington Memorial Bridge (AMB) that was constructed in 1932. This historic bridge is at the end of its lifespan and is slated for a complete overhaul in the coming years. I look forward to seeing you over dinner on May 20 as we listen to Larry Lee of the Historic American Engineering Record as he reviews AMB history and the plans which the National Park Service has for the bridge's rehabilitation.

With the very best of wishes,

Ranjit Sahai

*Ranjit S. Sahai, P.E., F.ASCE
President, ASCE-NCS 2013-14*

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Employment Clearinghouse

The ASCE-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 at newsletter@asce-ncs.org or phone (703) 243-5298.

Newsletter

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September 2014 Issue Deadline: 8/15/14

To Submit Articles: newsletter@asce-ncs.org

NCS eNewsletter Archives: go to www.asce-ncs.org and click on the Newsletters tab.

Address Changes: Call 1-800-548-ASCE, email member@asce.org, go to <http://www.asce.org>, or write: ASCE – Membership, 1801 Alexander Bell Drive, Reston, VA 20191. Remember to include your membership number.

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Committee Chairs

Please refer to the NCS website at <http://www.asce-ncs.org> for a current list of NCS committees and chairs.

NCS Committee News and Updates

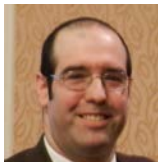
Sustainability Committee

Open House at ASCE Headquarters.

On May 15, the Sustainability Committee will host tours and a panel discussion at the ASCE Headquarters building in Reston, VA, which recently received LEED Gold Certification in the Existing Buildings-Operation & Maintenance category. Activities will begin at 6 p.m., and will highlight measures that allowed certification of the facility. Representatives from the US Green Building Council, the ASCE Foundation, and the Upgrade Designers (RSG Architects) will be in attendance. For additional information, contact Alex Rosenheim, Sustainability Committee Chairman, at 202-412-3090 or tcc-sus@asce-ncs.org.

Happy Hour/Summer Planning Meeting.

On June 24, the Committee will hold its Summer Planning Meeting, beginning at 6:30 p.m., at the Rock Bottom Brewery in Ballston Common Mall, Arlington, VA (4238 Wilson Boulevard, Suite 1256; <http://www.rockbottom.com/locations/arlington>). Between brews, the topic of discussion will be the Section's sustainability efforts for the 2014-15 year. Appetizers and soft drinks will be provided. For more information, contact Alex Rosenheim.



Water Resource Committee

The committee met on April 11 to continue planning for its mid-June luncheon event. At press time, the topic and date were still under development. Watch for further information on the luncheon event in the near future.



Any ASCE NCS members interested in participating in the Water Resources Committee should contact Sudhanshu Mishra (sumishra@gmail.com) or Piers Causton (causton_piers@bah.com).



Younger Members Forum

Monthly Happy Hours. The ASCE-NCS Younger Members Forum (YMF) holds monthly Happy Hours in either Arlington, VA, or Washington, DC. Happy Hours typically are the first Wednesday of each month unless a



holiday falls during that week. The YMF held its April 2 Happy Hour at *Penn Social* in Washington, DC. Approximately 20 members attended the event.

The next monthly Happy Hour will take place at 6 p.m. on Wednesday, May 7, at *The Green Turtle* in Arlington, VA, (900 North Glebe Road; <http://www.thegreenturtle.com/location/Arlington-at-Ballston>). YMF Happy



Hours will continue to be held throughout the summer. Look out for e-mails with specific locations and dates!

Stay Connected!

Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page at www.facebook.com/ASCENationalCapitalYMF. Also, follow us on Twitter (@asce_ncsYMF) at https://twitter.com/asce_ncsYMF.

Younger Member Professional Development Meeting. The NCS Younger Members are currently planning the next Professional Development meeting. The

presentation will be given by Yolanda Savage-Narva of America Walks, a national resource which fosters walkable communities. The event is scheduled for Wednesday, May 14, from 6:30-8:30 p.m. at Rockland's BBQ in Arlington, VA. Look for e-mails with additional information in the coming weeks!



For more information about the ASCE-NCS Younger Member Professional Development Meetings or if you would like to suggest a presentation topic, please contact Paul Parfitt at pparfitt@wje.com or David Smith at dsmith@amteengineering.com.



Get Involved! Are you interested in getting involved with Younger Members activities? Do you have ideas for social events or volunteering activities? Would you like to be a YMF board member?

The ASCE-NCS Younger Members Group is always looking for new members! We have great networking opportunities; events to stimulate your thinking, expand your experiences, and advance your career; and **we have fun while doing it!** We will be holding a 2014-2015 planning meeting in August to review events for the upcoming year and elect new board members. Look for more details in the coming months. Let us know if you are not already on our mailing list!

To become more active with the YMF or obtain information on its events, contact the YMF President, Jordan Pitt, at JPitt@parrishandpartners.com or ncsymfpresident@gmail.com.



Opportunity Alert! Help Needed on DC Infrastructure Report Card

The NCS Board is making a concerted effort to recruit six new members to its DC Infrastructure Report Card Subcommittee. The intent is to have the members identified by the end of May 2014. We expect a 6- to 9-month timeline within which to develop and circulate a draft of the DC Infrastructure Report Card for review by ASCE's Committee on America's Infrastructure.

If you have knowledge of and expertise in any one or more of the following 16

infrastructure components and wish to participate in this vital Section effort, e-mail Ranjit Sahai at president@asce-ncs.org. We look forward to recruiting six new members by the end of May.

Infrastructure Categories	Infrastructure Components
Water & Environment	<ul style="list-style-type: none"> • Dams • Drinking Water • Hazardous Waste • Levees • Solid Waste • Wastewater
Transportation	<ul style="list-style-type: none"> • Aviation • Bridges • Inland Waterways • Ports • Rail • Roads • Transit
Public Facilities	<ul style="list-style-type: none"> • Public Parks and Recreation • Schools
Energy	<ul style="list-style-type: none"> • Energy

April Meeting Recap Dialog with Michaela Wittmann

(Editor's note: Michaela Wittmann delivered the Sustainability Keynote at our Section Meeting on April 22, 2014. NCS President Ranjit Sahai communicated with her before she came to town to deliver her presentation on the Envision Sustainability Rating System with a case study on the William Jack Hernandez Sport Fish Hatchery in Anchorage, AK. This is a summary of their dialog.)

What person/event/project/activity inspired your interest in sustainability and when?

I have been passionate about sustainability honestly as long as I remember. Related to sustainability in the built environment, I was fortunate to meet some of the individuals that had just started the U.S. Green Building Council at a conference in 1994. A big light bulb went off for me regarding how sustainability could be incorporated into building design (which was my focus at the time). I have been inspired by Ray Anderson, former Chairman and CEO of Interface Carpets, who I was happy to call a

friend; Anita Roddick, who started the Body Shop, and Rob Watson, who was with the Natural Resources Defense Council when I met him.

What benefits can an infrastructure owner expect to gain by enlisting sustainability principles in their project?

Long-term operations savings; public support; enhanced design/decision-making process; and visibility and recognition

In your opinion, does the new Envision™ sustainability rating have the foundation needed to succeed in the marketplace? If yes, why; if no, what does it need to change to be better positioned to succeed?

Absolutely! It is flexible and addresses the right issues for the time. It specifically addresses two things that some other rating systems do not – leadership and climate/risk. I have used Envision™ on the following types of projects: utility plants, biodiversity/habitat protection, reclamation, roadway, bridge, water treatment plant,

and community plan. Envision™ works for all of them to ask the right questions and drive good design decisions. The credit documentation information does need to be tightened up a bit more and that is being worked on.

What book would you recommend to someone who is just beginning to explore sustainability in civil engineering?

The Engineer's Guide to Sustainable Development by Bill Wallace. *The Envision Resource Guide* is also a great reference.



Michaela Wittmann presents the 7th Annual Sustainability Keynote address.

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New NCS Distinguished Members

The NCS is proud to announce that the ASCE Board of Directors has elected two civil engineers from NCS to the grade of ASCE Distinguished Member. The ASCE Bylaws state:

A Distinguished Member shall be a Member or Fellow who shall have attained acknowledged eminence in some branch of engineering or in the

arts and sciences related thereto. A Distinguished Member shall be entitled to all the privileges of the Society and shall be exempt from payment of annual dues.

Prior to this year's election of 11 new Distinguished Members, only 626 other engineers in the 162-year

history of ASCE have been similarly honored.

Hearty congratulations from the NCS Board to **Michael K. Loose, P.E., USN (Ret'd), Dist.M.ASCE**, and to **Dennis M. Kamber, P.E., Dist.M.ASCE!**

Hey Students! Need Help Studying for the FE and PE Exams?

"Dr. Z" Provides Free Saturday Study Sessions

The University of the District of Columbia's (UDC) Dr. Ahmet Zeytinci (a.k.a., "Dr. Z") provides **free** study sessions most Saturday afternoons at UDC. Dr. Z is a Professor of Structural Engineering in the UDC Department of Civil and Mechanical Engineering and has been assisting



Dr. Zeytinci (standing, third from left) and Saturday session attendees.

students in acquiring the skills and problem-solving techniques necessary to pass the licensing exams for many years. Session attendees have a very high success rate for passing the Fundamentals of Engineering and Professional Engineer Exams. And, did we mention that these preparation sessions are **PRO-BONO**, and that Starbucks Coffee is always on Dr. Z?

If you are in school locally (or even recently graduated) and wondering when you'll

have time to independently polish your skills for the FE and PE Exams (and the motivation to follow-through on your own), join Dr. Z and other students from the region for peer learning group sessions at UDC on Saturdays. For further information, contact Dr. Z at azeytinci@udc.edu.



Dr. Z (center) attacks a problem with students. Click [HERE](#) for a typical home assignment.

NCS Past Presidents

Our past presidents has an opportunity to gather together for the Past Presidents Reception during the March 2014 Annual Awards Banquet. Attendees at the 2014 gathering included (from left) Kim Parker-Brown (1998-99), Joe Doane (1988-89), Campbell Graeub (1973-74), Brian Zelenko (2001-02), Qamar Kazmi (2012-13), Reza Darvishian (1999-2000), Mark Leeman (2010-11), Robert Evans (1994-95), Fady Afif (2009-10), Dean Westman (2007-08), John Casana (2011-12), and Bernie Dennis (1996-97). Present but not pictured was Robert Efimba (1983-84).



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May 7

The NCS Younger Members Forum (YMF) sponsors its monthly happy hour from 6-8 p.m. at *The Green Turtle* in Arlington, VA. Join younger members from the area for free appetizers and drink specials. Watch for an e-mail announcement in the near future. For additional information, contact Sonja Hinish at SHinish@wje.com. (See newsletter brief.)

May 12-16

Infrastructure Week 2014 will explore emerging solutions, innovative approaches, and best practices being developed nationwide to modernize aging infrastructure. Daily signature events will focus on major infrastructure challenges including freight and goods movement, passenger transportation, drinking water, and wastewater treatment. Click [HERE](#) for the full agenda and registration information.

May 14

NCS Geotechnical Committee luncheon. Hear Walter W. Burke, PE, of Paulus, Sokolowski and Sartor, LLC, present *Closure of Kingsland Park Sanitary Landfill, Bergen County, New Jersey*. The luncheon will be held from 11:30 a.m. to 1:30 p.m. at [Maggiano's, Tysons II Mall](#) (2001 International Drive, McLean, VA). Cost \$45 (after May 2) or \$10 for students. For additional information, contact Kellie Owens at 703-771-9844. Click [HERE](#) to register. A certificate for one Professional Development Hour will be available to attendees.

ALSO on May 14

The NCS Younger Members Professional Development Meeting will be held from 6:30-8:30 p.m. at *Rockland's Barbeque* in Arlington, VA. This event will feature a presentation by Yolanda Savage-Narva of America Walks. (See newsletter brief.)

May 15

The NCS Sustainability Committee hosts an Open House, including a panel discussion and building tours, at the ASCE Headquarters building in Reston, VA. The Headquarters building recently achieved LEED Gold Level Certification. Contact Alex Rosenheim at tcc-sus@asce-ncs.org

for additional information. (See newsletter brief.)

May 20

NCS monthly meeting at the Hilton Arlington. The Section's History & Heritage Committee will host Lawrence Lee for a presentation on the Arlington Memorial Bridge rehabilitation project. (See newsletter lead article.)

June 1-5

ASCE's Environmental & Water Resources Institute hosts the World Environmental & Water Resources Congress 2014: Water Without Borders, in Portland, OR. For additional information or to register, click [HERE](#).

June 6

ASCE Continuing Education Seminar "Seismic Design of Liquid-Storage Tanks" to be held at the Radisson Hotel Reagan National Airport in Arlington, VA. Earn 0.8 Continuing Education Unit (CEU). For more information, click [HERE](#).

June 24

NCS Sustainability Committee meeting at the Rock Bottom Brewery in the Ballston Common Mall, Ballston, VA. For additional information, contact Alex Rosenheim at tcc-sus@asce-ncs.org. (See newsletter brief.)

July 9-11

ASCE Continuing Education Seminar "Structural-Vibration Analysis: Design and Troubleshooting" to be held at the Holiday Inn Capitol in Washington, DC. Earn 2.1 CEUs. For more information, click [HERE](#).

July 15

NCS summer planning meeting for the 2014-15 year. **Get involved!** To attend the summer planning meeting, contact the Section President (at president@asce-ncs.org) or any member of the NCS Board of Directors (see newsletter page 2 for contact information). This is an opportunity to get more involved in Section activities, advance the profession, and have fun!

July 16-18

ASCE Continuing Education Seminar "Structural Design for Bomb Blast

Loads and Accidental Chemical Explosions (Building and Industrial Facilities)" to be held at the Radisson Hotel Reagan National Airport in Arlington, VA. Earn 2.1 CEUs. For more information, click [HERE](#).

July 21-23

ASCE's Energy Division will host the Shale Energy Engineering Conference in Pittsburgh, PA. For additional information or to register, click [HERE](#).

August 3-6

ASCE will sponsor the Pipelines 2014 Conference in Portland, OR, with the theme *From Underground to the Forefront of Innovation and Sustainability*. For additional information, click [HERE](#).

August

The NCS YMF will hold its 2014-2015 planning meeting to review events for the upcoming year and elect new board members. Watch for e-mail announcements in the near future. For additional information or to get on the YMF mailing list, contact the YMF President Jordan Pitt at JPitt@parrishandpartners.com or ncsymf-president@gmail.com.

September 16

First NCS monthly meeting of the 2014-15 year. The meeting topic will be developed at the NCS summer planning meeting in July. Watch for additional information on our September program in future notices.

September 18-19

ASCE Continuing Education Seminar "Project Management" to be held at the Radisson Hotel Reagan National Airport in Arlington, VA. Earn 1.5 CEUs. For more information, click [HERE](#).

November 6-8

ASCE will sponsor the *International Conference on Sustainable Infrastructure 2014* in Long Beach, CA. The event will focus on sustainability in the built environment, presenting relevant engineering research, demonstrations, and applications that contribute to competitiveness and well-being. For additional information, click [HERE](#).