

East House Underground Garage Rehabilitation at the U.S. Capitol

Scott Harrison, P.E., President of Restoration East LLC

The East House Underground Garage was constructed in late 1969 to provide parking for 700 congressional representatives, staffers, and visitors. The below-grade garage has an 87,500 square-foot footprint spanning an entire city block and consists of six parking decks in a split-level layout. The garage is crowned with a street-level terrace consisting of vast lawns; planters; stone; exposed aggregate sidewalks; architectural springhouses; and a fountain. This terrace provides a public park setting for Capitol Hill staffers, residents, and visitors. The roof of the garage structure is a precursor to the green roofs of today but with conventional 3-foot-deep soil beds below the planting areas.

By modern standards where buildings are light and flexible, this robust structure is distinctive for its load capacity. The perimeter is constructed of freestanding, buttressed retaining walls rising out of a mat slab. The elevated parking decks are dense, 10-inch-deep slabs supported by corbels at the

perimeter foundation walls and interior structural steel columns encased in concrete with shear heads in drop panels. The lowest level is a 6-inch-thick concrete slab on gravel over the mat foundation. There are slab expansion joints traversing the structure with additional joints where the elevated decks (including the terrace superstructure) intersect the earth retaining walls. Longitudinal corbels provide a slide-bearing support at the perimeter. Stairs, shafts, and plenums were incorporated into the cast-in-place design.

The structure suffered from prolonged and significant water intrusion due to the failing subterranean waterproofing scheme. The owner invested in an exterior waterproofing system repair prior to undertaking the interior rehabilitation; however, the leakage had caused significant damage to the perimeter walls, stairs, and supported floors. Originally, the interior face of the walls had received an ironite coating; this had been compromised by water intrusion from the terrace above.

The owner engaged an architectural and engineering firm to perform a comprehensive condition investigation of the parking garage to determine the extent and causes of the concrete deterioration. The investigation integrated nondestructive chain-drag surveying to locate voids with destructive coring to determine chloride ion content and the compressive strengths of the structural concrete. The existing conditions survey also incorporated a mechanical evaluation, electrical assessment, fire protection consideration, and plumbing efficiency evaluation.

A design firm was employed to prepare specifications and design documents for the structural rehabilitation, as well as a complete renovation of peripheral building implements encompassing life safety systems—mechanical, electrical, and plumbing systems and all of the finishes. The contractor was awarded the contract under a best-value procurement.

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Deteriorated Soffit Areas Identified for Repair



Prepared Repair Area With Steel Replacements

President's Corner

Did you know that the National Capital Section (NCS) of ASCE will celebrate its 100th anniversary in the year 2016? Yes, it will soon be one hundred years since this Section began serving the needs of local members of the American Society of Civil Engineers!

This year, we've established an executive committee to begin planning our centennial celebrations. The chairman of that committee is Scott Wolf, our Vice President for the 2013-14 year. If you have ideas on how the Section may celebrate its centennial, drop him a note; or better yet, join the committee and help evolve the programs we conduct in 2016 to help our members celebrate this milestone.



Any member of the Section, including you, has an opportunity to serve on the Section's Board. If you like making a difference in your community through activities under the ASCE umbrella, consider joining the NCS Board; we are actively looking for Board members for the 2014-15

year. To help you decide whether serving on the NCS Board is for you, I recently asked our current and past Board members to share thoughts on "What has it meant to be an NCS Board Member?" This issue debuts that series with one perspective each month. I hope some of the thoughts shared by our existing and past Board members will resonate with you.

Last month, Mr. Ryan Bucceri's presentation on The Potomac Water

Supply Program shared the steps Loudoun Water is taking to serve the future water supply needs of Loudoun County. His presentation was attended by almost 70 members and guests. I was inspired by the breadth and scope of the project and proud that our profession provides opportunities to positively impact so many lives.

This month, our Section Meeting will focus on the Architect of the Capitol's East House Office Building Garage rehabilitation project that received LEED Gold certification from USGBC. I look forward to seeing you over dinner on October 15th. ■

Ranjit Sahai

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

IMPORTANT: NCS Transitions from CVent to Constant Contact

We're giving our e-mails a make-over!

The NCS has transitioned from our previous e-mail contract system (CVent) to the Constant Contact system, which will be used for all ASCE-NCS e-mail communication and event registration in the future. In order to receive future NCS e-mails, **please be sure to add asce-ncs@asce-ncs.org to your address book to ensure that ASCE-NCS e-mails will be delivered to your Inbox**

and not to the Spam/Junk folder. The Younger Members Group has already successfully transitioned to this new e-mail system over the summer. The September 2013 issue of the *ASCE-NCS E-Update* (also known as "the newsletter") was the first to use the new Constant Contact system.

We typically issue the newsletter on the first of every month, September to

May (excluding December). If you're not receiving the newsletter (or have any other comments regarding the newsletter), let us know by contacting us at newsletter@asce-ncs.org.

We greatly appreciate your patience during this transition, and hope to see you at an NCS event soon! ■

DISCOVER ENGINEERING

Newsletter

L.J. Sauter, Jr., Editor
Telephone: 703-243-5298

November 2013 Issue Deadline:
October 18, 2013

To Submit Articles:
newsletter@asce-ncs.org

Address Changes:
Call 1-800-548-ASCE, e-mail 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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Please refer to the NCS website at <http://www.asce-ncs.org> for a current list of NCS committees and chairs.

East House Underground Garage Rehabilitation at the U.S. Capitol

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The completed garage repair scope of work included, among other things:

- 172,000 square feet of wall-to-wall hydrodemolition of the top 5 inches of the elevated slabs with the incorporation of a graded concrete overlay to provide superior drainage to a revitalized storm sewer design;
- 41,000 square feet of full-depth, 10 to 12-inch-thick slab repairs;
- repair and modification of the foundation wall corbels that bear the elevated slab perimeters;
- abatement of asbestos and removal of lead paint; and
- replacement and augmentation of 42 tons of slab reinforcing steel.

For such a sensitive location and large project size, the project team faced numerous challenges during the construction process, including:

- a demanding construction schedule,
- repair of the corbel supports,
- a secure environment,
- noise constraints, and
- increased scope.

Even given the challenges faced, all of the work for this project was completed ahead of schedule and under the owner's budget. The use of hydrodemolition enabled the contractor to complete all of the concrete removal and repair work within 6 months.

Originally, the project was designed to meet the U.S. Green Building Council (USGBC) LEED Silver guidelines.

Ultimately, the team was able to work together to obtain a Gold Certification (the only parking garage rehabilitation to obtain a LEED Gold rating from the USGBC). Additionally, this project received the 2012 Sustainability Award from the ASCE-NCS.

Scott B. Harrison, P.E., is the President of Restoration East LLC in Baltimore, MD. He has over 27 years of contracting and structural engineering experience in the restoration of building structures. He has a B.S. in Structural Engineering from Virginia Tech and is a registered professional engineer in Virginia, Maryland, the District of Columbia, and Delaware. Scott has

served on the Board of Directors and has held all the officer positions for the Baltimore-Washington Chapter of the International Concrete Repair Institute (ICRI). He currently serves on the ICRI National Board of Directors; and the ICRI Education, Publications, Marketing, and Masonry Repair Committees. He is a Member of ASCE.

Please join us for the October NCS meeting on **Tuesday, October 15**.

The meeting will be held at our usual meeting place, the Hilton Arlington, at 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.). This location is in the same block as the Ballston Station on Metro's Orange Line. Registration and networking will be from 6 p.m. to 6:45 p.m., followed by dinner. The program will conclude by 8:30 p.m. The cost will be \$10 for students, \$45 for those preregistering, and \$55 for walk-ins as space allows. **Please RSVP by October 9**. Click [HERE](#) to register. For questions, please contact Ranjit Sahai at president@asce-ncs.org or 703-994-4849.

Please note that because the NCS is charged for each meal guaranteed, those who register but are unable to attend will be charged the full registration fee. We welcome "walk-up" attendees, including any registrations made after the guarantee is given to the hotel. However, the cost for "walk-ups" is higher because the Section is charged accordingly by the hotel for late registrations. ■



Completed Parking Garage Interior

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What Does it Mean to be a Member of the NCS Board?

Editors Note: With this edition of the NCS newsletter, we begin a new monthly feature which will focus on what being on the NCS Board of Directors (BOD) has meant to current and former members. The premiere article in this series was prepared by Fernando Pons, an NCS Past President (2008-09).

Having been involved in the NCS BOD has been fulfilling to me on a personal and professional basis. I have built life-long relationships with fellow civil engineers with whom I share mutual professional interests. Being involved with the NCS BOD also helped me hone-in on important soft skills such as writing, public speaking, and finance, especially if you take on the important roles of newsletter editor, treasurer, and president. Being part of the NCS BOD has also been a wonderful way to make a difference, give back to our profession, and outreach to our community through the many worthwhile programs that we participate in (i.e., student scholarship program, sustainability, Engineer’s Week, and Boundary Stones, just to mention a few).

About Fernando:

President of Pons & Associates, LLC, based in Herndon, VA, where his practice focuses on providing geotechnical engineering, environmental and facilities consulting services (www.ponsassociates.com). Prior to founding Pons & Associates, he worked for 20 years at nationally-ranked geo-environmental specialty firms, including 14 years in various senior-level positions. He is a member of the ASCE’s Committee on Sustainability and Chair of the ASCE’s Infrastructure and Research Policy Committee.



Fernando is also a P.E. in four states and a LEED Accredited Professional. He holds B.S. and M.S. degrees in Civil Engineering from Florida International University and the Georgia Institute of Technology, respectively; and an MBA from George Mason University. Fernando and his family live in Reston, VA. He can be reached at fpons@ponsassociates.com. ■

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ASCE Region 2 Assembly

Saturday November 16th, 2013

All Sections, Branches, Younger Member Forums, Student Chapters, Faculty Advisors, and Practitioner Advisors are strongly encouraged to attend the 2013 Region 2 Assembly which is scheduled for November 16 in Williamsport, PA, at the Pennsylvania College of Technology. For those of you who don't know, Region 2 includes Delaware, Maryland, Pennsylvania, and Washington, DC.

The Assembly program is packed with interesting presentations. This year's event will include an inspirational presentation by Diann Roffe. Diann is an Olympic and World Champion Gold Medalist and a six-time U.S. National Champion in alpine skiing. Diann is very real and very engaging and we are excited to have her with us. There will be a presentation about Engineers Without Borders (EWB) and the

awesome work that several of the local chapters are doing as part of EWB.

Tony Puntin, who was one of the ASCE 2013 President-elect nominees, will be providing more information on ASCE's Raise the Bar Initiative. Tony is an effusive speaker with local, regional, and national ASCE experience and we are fortunate to have him as part of program this year. Finally, there will be a legislative update about federal infrastructure funding.

Please plan on sending a representative or delegation from your Section to the Assembly. We encourage the Sections to mentor Younger Member Groups and Student Chapters by facilitating car-pooling, if possible.

Sponsorships are available to help support the Assembly. Contact Tom Imholte, using the information below, if

you are interested. Sponsorships range from \$250 to \$1,000.

Registration flyers will be going out shortly so be on the look-out!

If you have any questions, please contact Tom Imholte at 717-790-9565 or tjimholte@modjeski.com.



Diann brings home the gold

2014 ASCE-NCS Awards Banquet

Award Nominations Now Being Accepted

The Annual Awards Banquet gives us the opportunity to recognize and celebrate local excellence in projects, engineers, and students who have contributed to our society and our community. Every year, the NCS presents a number of awards during its annual banquet. Recognized parties include our meritorious service award winners, outstanding civil engineering project, student scholarship award winners, and members of the NCS who have achieved Life Member status. The Section award candidates are nominated by the Awards and Nominations Committee which actively seeks recommendations from NCS committees and members. **All members are encouraged to nominate**, either by e-mail or traditional mail, **members and/or projects for one of these awards**. The awards are granted by the NCS Board of Directors and are given at the Section's Annual Awards Banquet to be held in the spring of 2014. The awards are described below.

Community Service Award

The Community Service Award recognizes outstanding contributions by an individual toward community improvement in the Washington metropolitan area. The nomination can be submitted directly by the individual or by another member on his/her behalf.

The nomination shall briefly describe the achievements and contributions of time and talent toward a civil engineering-related activity that has furthered the welfare of the community within a three-year period preceding the award. The Awards Committee reviews and selects the winner for this year's award. The awardee will be notified and invited as an honored guest to attend the banquet and to receive the award – an engraved plaque, naming the individual and accomplishment.

Outstanding Civil Engineering Project

This award recognizes a local civil engineering project and is given when an engineering project in the National Capital area is deemed to demonstrate the greatest civil engineering skills and represents the greatest contribution to civil engineering progress. The project must have been substantially completed within the preceding three years. In granting the award, the Awards Committee considers the contribution to the well being of individuals, the resourcefulness in planning, the solution of design problems, the pioneering use of materials and methods, innovations in construction, impact on the physical environment, unusual aspects, and aesthetic values. The possible adverse effects of the project are taken

into account as well as the beneficial aspects. The award is made for uniqueness, contribution to the regional quality of life, and to recognize technical achievement. An award plaque is given, naming the project and the firms and/or agencies involved. The awardees are notified and invited to attend the banquet as guests to receive the award.

Meritorious Service Award

This award recognizes an individual member of the NCS who has made outstanding contributions to the work of the Section. The awardee must be an active member who has contributed significant time and talent to the Section and who sets a high standard of professionalism through service.

Please submit all nominations to Qamar Kazmi no later than **January 31, 2014**.

Qamar A.O. Kazmi, P.E.
Chair, Awards and
Nomination Committee
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Suite LL-14
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NCS Committee News and Updates

Sustainability Committee

October 30 Professional Development Event

On Wednesday, October 30, the NCS Sustainability Committee will be hosting a Professional Development Dinner Event from 6:30-8:30 p.m. at *Indique Heights* in Chevy Chase, MD (near Mazza Galleria on Metro's Red Line).

The speaker will be Dr. Donald Boesch, Professor of Marine Science and President of the University of Maryland Center for Environmental Science. Dr. Boesch led the effort to study and report on the findings regarding the worst-case impacts on Maryland infrastructure due to an anticipated 2-foot sea level rise. The study was commissioned by and presented this summer to the State of Maryland, as requested by Governor Martin O'Malley. The title of Dr. Boesch's talk will be "The Challenge of Projecting Future Sea Levels in the Chesapeake Bay Region."

Dr. Boesch's presentation will cover the results of the study and its recommendations for infrastructure action in the state of Maryland through 2050. A question-and-answer period will follow the presentation. Attendees will be awarded one Professional Development Hour (PDH).

Please watch for an announcement with more details in the very near future. For additional information, contact Alex Rosenheim, ASCE-NCS Sustainability Committee Chairman, at tcc-sus@asce-ncs.org.

Automation Committee

Smart Bridge Technology

When the new Flagler Bridge in West Palm Beach is completed, it will be smarter than the average bridge. The Florida Department of Transportation is including built-in sensors on the bridge to help keep tabs on its health and maintenance. The \$94.2 million bridge will have a new monitoring system for the mechanical parts of the drawbridge, allowing maintenance crews to keep tabs on its condition remotely. Read more at <http://www.sun-sentinel.com/news/palm-beach/fl-smart-flagler-bridge-20130915,0,1071651.story>.



Younger Members Forum

Monthly Happy Hours. The NCS Younger Members Forum (YMF) holds monthly happy hours in either Arlington, VA, or Washington, DC. Happy hours are typically held the first Wednesday of each month unless a holiday falls during that week. For the September happy hour, YMF members enjoyed the pleasant weather along with snacks and drinks with fellow engineers on the rooftop at *Whitlow's on Wilson* in Arlington, VA.

Our next Happy Hour will be held at Hill Country BBQ (Washington, DC) on **Wednesday, October 2**, from 6 - 8 p.m. (<http://www.hillcountrywdc.com/>). Join younger members from the area for free appetizers and drink specials. For additional information, contact Sonja Hinish at SHinish@wje.com.



Younger Member Professional Development Meeting. On **Wednesday, October 22**, join us from 6:30 - 8:30 p.m. at *McCormick and Schmick's* (F Street NW, Washington, DC; mccormickandschmicks.com) for a presentation on *Land Planning in 3D – How GIS Technology is Shaping Our Future Cities*. Our speakers will be Aelisa Carr, P.E. & CFM, and Gore Bolton, P.E. & PLS, both with AMT, LLC. This discussion will focus on the effects of building heights within urban areas, as the new creation of city skylines. Our presenters will offer insight into what other cities around the world are doing, and what technology is allowing stakeholders to model skylines and look forward. They will share their experiences in working with this technology on recent projects, and the future of city planning.

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.



2014 Planning Meeting. On September 5, the YMF held its 2014 planning meeting at *Lyon Hall* in Arlington, VA. In addition to discussing professional development, social and other activities for the coming year, elections for the 2013-14 term were held. Our new officers are:

- President – Jordan Pitt
- Vice President – Kelly Cronin
- Secretary – Eric Kenney
- Social Chairs – Sonja Hinish and Sara Degroot
- Professional Development – Paul Parfitt and David Smith
- Community Outreach – Kelsey Sheridan and Emily Dean

In addition to the positions above, everyone at the planning meeting was willing to help out to ensure another fun and educational year with the YMF.

If you would like to become more active with the YMF or would like more information on our events, please contact the YMF President Jordan Pitt at wjpitt@mbakercorp.com or ncsymfpresident@gmail.com.



2014 ASCE-NCS Sustainability Award Nomination

The ninth annual presentation of the ASCE-NCS Sustainability Award will recognize either private-industry outreach initiatives/projects or public legislation/programs in the metropolitan Washington, DC area that advance or promote the responsible and sustainable development of infrastructure, the built environment, or the conservation of natural resources. Last year (2013), the award recipient was the DC Government's Consolidated Forensic Laboratory building.

Award/Recognition Criteria

1. The nominated initiative or project advances or promotes sustainable development as defined by the ASCE's Code of Ethics:

"Sustainable development is the challenge of meeting human needs for natural resources, industrial products, energy, food, transportation, shelter,

and effective waste management while conserving and protecting environmental quality and the natural resource base essential for future development."

2. The nominated initiative or project must adopt a long-term view, cognizant of environmental, social, and economic implications, and place heavy emphasis on the impact of choices made now on succeeding generations.

The nominated initiative or project must be located within the geographical limits of the NCS, i.e., the jurisdictions of Montgomery County, Prince George's County, Loudoun County, Fairfax County, City of Alexandria, Arlington County, or the District of Columbia.

Please provide a succinct description of project or initiative (limit to 100 words). Your nomination should address the following:

- the public or private entity responsible for the program (include point of contact information, if available), and
- how the nomination meets the general criteria outlined above.

The nominating individual must provide his/her name, affiliation, telephone number, and e-mail address, and all nominations should be submitted by **February 15, 2014**. For more information or to submit a nomination, contact the Chair of the ASCE-NCS Sustainability Committee, Alex Rosenheim, P.E., LEED AP, M. ASCE, at alex.rosenheim@gmail.com. This year's winner will be announced at the NCS Sustainability Banquet in the spring of 2014. Anyone interested in becoming involved with the Sustainability Committee please feel free to contact Mr. Rosenheim.



Stay on the Cutting Edge at the 2013 Carbon Management Technology Conference

Founder Societies Technologies for Carbon Management-Sponsored Event, October 21-23, 2013

Join professionals from all engineering disciplines to examine the reduction of greenhouse gas emissions and adaptation to changing climate and how to meet these challenges. Come to Alexandria, VA, October 21-23, for the 2013 Carbon Management Technology Conference, co-sponsored by ASCE. Gain engineering expertise, experience and perspectives on technologies, strategies, policies, management systems, metrics, and other key issues. Discover novel approaches and new technologies that are instrumental to technical,

economic and social advancements in carbon management. Register today and be part of the one conference focused on the engineering perspectives critical to meeting the challenge of greenhouse gas emissions.

Sponsoring Organizations

The Founder Societies Technologies for Carbon Management is comprised of the following eight organizations:



2013-14 ASCE-NCS Sponsorship Opportunities

Dear NCS sponsors: We appreciate your support of the civil engineering profession. As the volunteer-run, local Section of the ASCE, your sponsorships allow NCS to reward deserving civil engineering students with scholarships, promote our profession with public outreach efforts, and support the professional and personal growth of our members.

The Section is committed to assisting civil engineering students with scholarships through its Scholarship Trust. Surplus funds from the Section add to the Scholarship Trust, subsidize the fees

we charge our members for educational Section Meetings, and help us nurture leadership opportunities for your employees through their participation in our committees. In short, your contributions assist us in our quest to support the needs of civil engineering students and professionals in our region.

In 2011, the NCS re-structured its sponsorship opportunities to include a new meeting sponsorship as well as our traditional newsletter and Annual Awards Banquet sponsorships. Rather than asking multiple times for support,

the NCS now offers tiered sponsorship packages to aid you in determining your annual support level. The tiered packages offer additional discounts to help you remain a visible partner with the ASCE-NCS throughout the year. Visible recognition for your support is a key part of the program.

To assist you in selecting the level of support appropriate for your firm, we have outlined our specific sponsorship opportunities below.

Individual Sponsorship Categories

1. Newsletter Sponsor – Cost: \$350

You can reach more than 3,200 members eight times per year through a business card posting in the NCS newsletter. As we do not accept advertising, only sponsors are presented in our newsletter.

2. Annual Awards Banquet Sponsor – Cost: \$300 - \$500

The NCS Annual Awards Banquet is scheduled for Tuesday, March 18, 2014. With attendance at the banquet typically exceeding 150, we rely on sponsors to support a quality event. As a sponsor, you will receive either one or two free admission tickets to the Banquet for a \$300 or \$500 donation, respectively.

Additionally, your firm will be recognized in the event program, on a display board located within the banquet hall, on our website, and in our newsletter. This will require you to send us your company logo in electronic format (JPG preferred). Please forward the logo by February 18, 2014, to L.J. Sauter, Jr., the NCS newsletter editor, at newsletter@asce-ncs.org.

3. Meeting Sponsor – Cost: \$150

You have the opportunity to share and present your organization with attendees at a regular monthly Section meeting. Meeting sponsorship entitles your organization the opportunity to exhibit promotional

materials on a display table before the meeting and be recognized by the NCS in both our newsletter and from the lectern. A limited number of meeting sponsorships are available; contact Ranjit Sahai at president@asce-ncs.org to confirm your slot early.

4. Scholarship Fund, Direct Contribution

NCS awards scholarships each year to outstanding students from local universities. As in previous years, several thousand dollars in scholarships will be announced at the Annual Awards Banquet. While \$100 is suggested, no contribution is considered too small and all are appreciated.

ASCE-NCS Partner Program

The Partner Program was developed to provide exclusive opportunities and reduced pricing to those who become a true partner to the ASCE-NCS by sponsoring multiple programs each year. The Partner Program has been tiered to help you select the most popular combinations of program support. The chart at right was developed to assist you in selecting the level most appropriate to your needs.

Please contact sponsors@asce-ncs.org for additional information. Thank you in advance for your continued support of ASCE and the NCS.

Note that we have included two items exclusive to partners within the program. The first item is a thank-you within the newsletter in two issues per

Partner Support Program	Program Sponsor	Silver Sponsor	Gold Sponsor	Platinum Sponsor
1. Newsletter sponsor Business card recognition in 8 issues Partner Level recognition in 2 issues	\$350	✓ ✓	✓ ✓	✓ ✓
2. Annual Awards Banquet Sponsor 2 complimentary passes 1 complimentary pass	\$500 \$300	✓	✓	✓
3. Monthly Meeting Sponsor 5-minute welcome presentation Exhibit and table display	\$150		✓	✓ ✓
4. Scholarship Fund, Direct Contribution (Program Sponsor: Add Commitments)	\$100	\$450	\$700	\$1,000

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Trip to the National Building Museum – for CEs in Your Life

Editor's Note: The following was excerpted from a longer response to a telephone call that the editor received in August, requesting help in identifying engineering-related activities that might interest a civil engineer visiting the Washington area. The caller's name has been changed for privacy purposes.



Greetings, Catherine -

Thank you for calling to inquire about engineering-related activities which may be of interest to your father during his visit. Unfortunately, there are very limited activities during this part of the summer because so many folks are on holiday. However, there [is one thing] you may want to consider.

Of all the items of history and significance in Washington, DC, my personal favorite is the National Building Museum (NBM) at 401 F Street, NW. This is across the street from Metro's Red Line at the Judiciary Square Station. Be prepared to park in a neighborhood parking garage if you drive because street parking is limited.

This structure was built by Montgomery C. Meigs, and upon completion, was critically referred to by many as "Meigs' Big Red Barn" (although it was officially known as the Pension Building). It has housed many activities since its construction after the Civil War. It's a GEM in this city of monuments. Meigs was also responsible for numerous other engineering feats, including construction of Washington's water supply system (the Great Falls intake structures to the Cabin John Aqueduct Bridge to the reservoirs in Northwest DC and on to the Capitol building itself). Google "Meigs" for a wealth of info on this fascinating man. For more information, click [HERE](#).

PLEASE call the NBM ahead of your visit (202-272-2448) and arrange for a docent to walk your father around the building. Tell them he's an engineer and interested in Meigs and the engineering details that were designed into the building. My wife and I did this several years ago and are still stunned by this incredible structure and the man who designed and built it. Be sure to ask why some of the stairways have steps with short risers and long treads.

The NCS Scholarship Trust – Your Section Voluntary Contribution

Many of you know that our Section's Scholarship Trust annually awards scholarships to high-academic civil engineering students at the five universities in our Section boundary: Howard University, Catholic University, the George Washington University, University of District of Columbia, and George Mason University. We need your help with this effort, and it's easy.

You will be receiving your annual ASCE membership dues request soon. On the form, the block for Section

Voluntary Contribution allows you to contribute directly to our NCS Scholarship Trust. Your contribution will have a direct impact on the future of the Civil Engineering profession. Please be generous in your contribution – while \$25 is suggested, no contribution is considered too small.

Other sources of funding for our Trust include the Past Presidents Annual Contributions, Memorial Contributions, and Corporate Contributions.

Editor's Note: Additional information on the history and workings of the NCS Scholarship Trust was provided in three articles written by Bernie Dennis, NCS Past President (1996-97), and presented in the February, April, and May 2011 newsletters. These can be accessed at www.asce-ncs.org.

ASCE-NCS Newsletter Patrons



Marriage Changes the Game, Like Business

by *Ranjit S. Sahai, P.E., F.ASCE*

When you get married, the circle of influence of your household grows: spouse and kids, and their relatives and friends. Consequently, your fiscal responsibilities grow, too: diamond ring, food, shelter, gifts, diapers, higher education, entertainment, nest egg for retirement, and so on.

When you establish a business, the circle of influence of your market-serving idea grows: customers, employees, vendors, and investors. Consequently, your fiscal responsibilities grow, too: marketing, sales, service, delivery, research, finance, legal, and so on.

In both scenarios, marriage and business, how you approach your responsibilities impacts the fiscal health of the many. To succeed spectacularly, you need leverage. For many human endeavors in modern society, technology can deliver that leverage.

If your spouse and/or kids; or customers, employees, vendors, and/or investors make you aware of unmet needs, look around for examples where such needs are being met exceptionally well. You may uncover ideas that could change the game for you.



Your actions control the fiscal health of the many.

Timeless Ways to Grow Business with Technology

Did you find this information helpful? If so, make it a point to watch for similar information that will come your way monthly in NCS' Business & Technology Corner. If you simply can't wait for the monthly installments and wish to get your hands on all the tips at one time, ask for the booklet "Timeless Ways to Grow Business with Technology." To request a copy of this valuable, no-cost resource, visit <http://www.rcare-solutions.com>.

About the Author

Ranjit has been writing on and teaching computer topics since 1987 and has authored several books on CAD. His next book, *The Silent Motor* (thesilentmotor.com), is on success in life and business. He is the founder of RAM Corporation and the 2013-14 President of the ASCE-NCS. He welcomes comments and feedback via e-mail. You can e-mail Ranjit at president@asce-ncs.org



2013-14 ASCE-NCS Sponsorship Opportunities

continued from page 8

year. This exclusive call-out will highlight your commitment to the NCS by listing your support by level within the program. The second item is only available to those who select the Platinum level of partnership. These companies

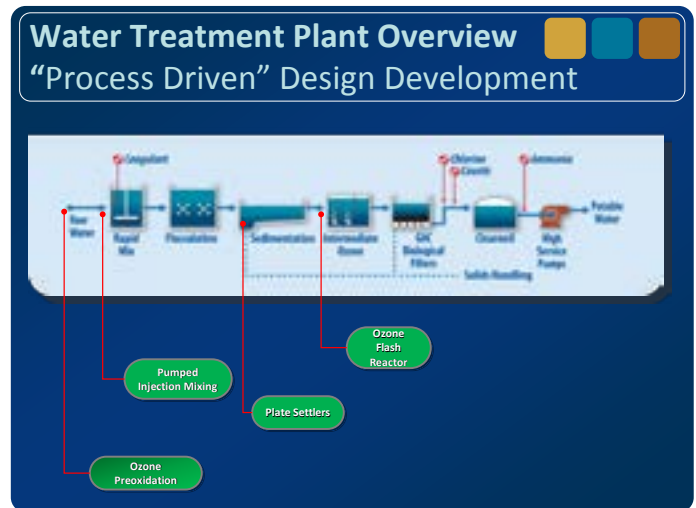
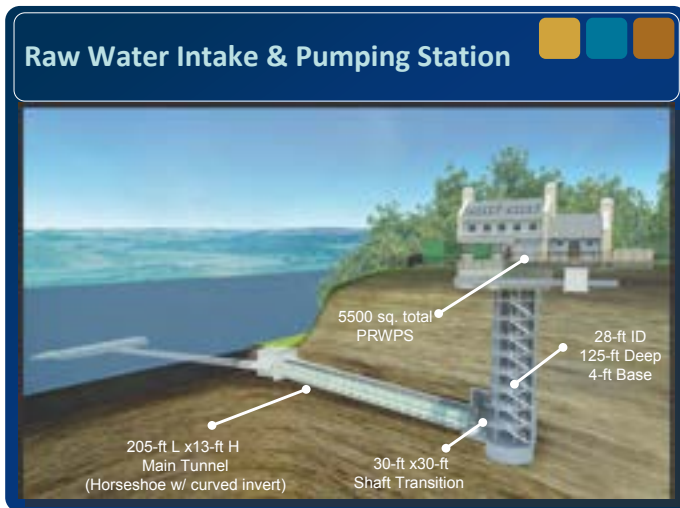
have the unique opportunity to address the attendees of one NCS meeting (excluding the Awards Banquet) through a 3-minute welcome at the beginning of the meeting. This is a unique opportunity to share the capabilities of your

firm, in person, with the ASCE-NCS members and students in attendance at our meeting. Only seven Platinum Level Sponsorships are available each year – allowing a focus on only one company per meeting.

ASCE-NCS Newsletter Patrons



September Meeting Recap – The Potomac Water Supply Program



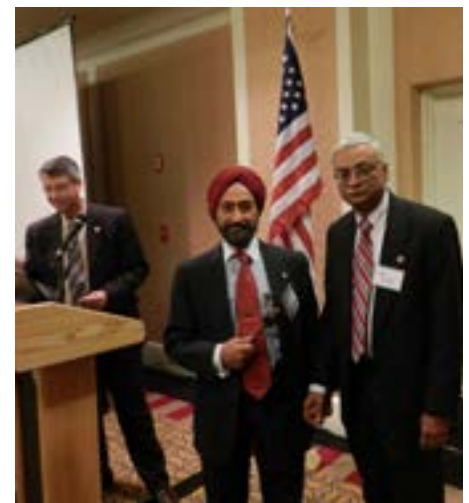
The kick-off meeting of the fall 2013-14 season featured an interesting presentation by Mr. Ryan Bucceri, Water Supply Program Manager for Loudoun Water, on Loudoun County’s Potomac Water Supply Program (Program). By 2040, Loudoun Water’s customers are expected to require up to 90 million gallons of drinking water every day, representing a 40 million gallon per day increase from today’s customer demand. To meet those needs, Loudoun County has developed a \$459 million Program to sustainably expand the water supply capacity and protect local quality of life for future generations. The Program is an innovative approach to water supply management, incorporating the following five elements:

- a Potomac River intake and pumping station;
- raw water and drinking water transmission pipelines;
- quarry water storage;
- a water treatment plant; and
- regional collaboration.

The Program is being developed in two phases. Phase I/IA is scheduled for implementation from 2011 to 2020 and is budgeted at \$388 million. Phase I will entail a raw water intake/raw water pumping station at the Potomac River, raw water transmission from the pumping station to a new water treatment plant, and the finished water transmission facilities. Phase IA entails the quarry development for 1.02 billion gallons of water storage. Phase II is scheduled for implementation from 2021 to 2040 and is budgeted for \$71 million. As part of a phased and “just in-time”

approach, it is a capacity expansion effort which includes the integration of additional quarries to provide up to 4 billion gallons of water storage.

Mr. Bucceri briefed almost 70 professionals on the Program, which was followed by numerous questions from the audience. The September meeting also provided a forum for the new NCS President and Board of Directors to be inducted and introduced to the membership. We were fortunate and honored to have Rob Victor, the ASCE Region 2 Director, on hand to conduct the induction.



Incoming NCS President Ranjit Sahai accepts the gavel from outgoing President Qamar Kazmi. Rob Victor, ASCE Region 2 Director, looks on.



The new NCS Board of Directors for the 2013-14 term (from left): John Casana, Past President; Qamar Kazmi, Past President; Stephen Powers, Director; Fady Afif, Director; L.J. Sauter, Newsletter Editor; Christian Manalo, Secretary; Rollie Berry, Treasurer; Scott Wolf, Vice President; and Ranjit Sahai, President. Not pictured: Sara Guerrero, Director; Emily Dean, Director; and Jordan Pitt, YMF President.

EMPLOYERS

Do you need Civil Engineers or Technicians?

EMPLOYEES

Are you looking for a Civil Engineering or Technician Position?

Use the NCS "Employment Clearinghouse"

For a number of years, the NCS has sponsored an "Employment Clearinghouse" feature in the monthly NCS newsletter. The intent is to assist public and private organizations in the Washington metropolitan area in obtaining civil engineering employees and engineering technicians, and to apprise the 3,200+ NCS members of employment opportunities.

Firms and public agencies (bona fide employers; employment agencies are not permitted to use the service) who have civil engineering positions available, and individuals seeking engineering employment, may submit requests using the instructions below. There is no charge for this service. "Position Desired" announcements are restricted to ASCE members, civil engineering students, and civil engineering technicians (such as draftsmen and surveyors). If you have no current need for this service, please keep the information on file for future use, or forward it to your personnel director.

FREE ANNOUNCEMENTS – HIGHLY FOCUSED READERSHIP

AMERICAN SOCIETY OF CIVIL ENGINEERS – NATIONAL CAPITAL SECTION EMPLOYMENT CLEARINGHOUSE

Civil engineering or technician "Position Available" or "Position Desired" announcements, as presented by you via e-mail to newsletter@asce-ncs.org, will be published in the monthly NCS newsletter on a space-available basis and will be posted on the NCS website. The newsletter is published near the first of each month, September through May (but not in December). Deadline for the Clearinghouse information is 4 weeks prior to publication. Each request will be published on a one-time basis; separate requests must be submitted for each additional insertion. Website postings will be kept on the site for 60 days.

Please note that ASCE policy prohibits discrimination in employment. The Clearinghouse column will include the statement "All employers listed herein are equal opportunity employers."

Indicate whether the submission is a "Position Available" or "Position Desired," and present the essentials only; the who, what, where, and when. Ads should be brief (limit to 50 words) and avoid self-laudatory statements. The NCS reserves the right to edit all ads. E-mail submissions are preferred and should include the senders name, title, firm, telephone number, and e-mail address. Send ads to newsletter@asce-ncs.org, or call (703) 243-5298.

Employment Clearinghouse

Positions Available

Civil (Site) Engineer: The Overseas Buildings Operations Bureau of the U.S. Department of State has an opening for a qualified Civil Engineer with an emphasis on Site Engineering and experience in building design and construction. The opening is for a Personal Services Contract with a salary equivalent to grade GS 0810-14 (starting salary \$105,211.00). Overseas travel is required. Candidate must be a U.S. Citizen and, if selected, must obtain a Security Clearance. This announcement will be posted on Monster.com within the next a few weeks. For further information, see <http://www.monster.com>.

Engineering Manager: Black & Veatch Corporation (B&V) has added an Engineering Manager position in its Gaithersburg market. This professional will develop, plan, and direct the engineering work for major water and wastewater treatment plant projects and will coordinate the design of projects with both staff and client management. The preferred candidate will have a minimum of 10 years experience in designing medium-to-large-sized water and/or wastewater treatment plant facilities and a Bachelor's Degree in Engineering.

B&V offers a highly competitive salary and benefit program and places a focus on career development for its professionals. To learn more about this opportunity, please forward an

e-mail of inquiry to wirtzm@bv.com or click on the following link to view the opportunity and apply online: https://sjobs.brassring.com/1033/ASP/TG/cim_jobdetail.asp?partnerid=25131&siteid=5173&areq=16680BR

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.

Upcoming Events (Also available on the NCS website under the Events tab; click [HERE](#).)

October 2

The NCS Younger Members Group sponsors its monthly happy hour from 6 - 8 p.m. at *Hill Country BBQ* in Washington, DC. Join younger members from the area for free appetizers and drink specials. For additional information, contact Sonja Hinish at SHinish@wje.com. (See newsletter brief.)

October 15

NCS monthly meeting at the Hilton Arlington. The program will feature a presentation by Scott Harrison on the East House Office Building Garage Restoration Project. (See newsletter lead article.)

October 21–23

The Founder Societies Technologies for Carbon Management hosts the 2013 Carbon Management Technology Conference in Alexandria, VA. Co-sponsored by the ASCE. For more information or to register, click [HERE](#). (See newsletter brief.)

October 22

The NCS Younger Members Group will host a professional development meeting from 6:30 - 8:30 p.m. at McCormick and Schmick's (K Street NW location). The speakers will be Aelisa Carr and Gore Bolton (AMT, LLC), who will discuss the effects of building heights on urban areas in creating new skylines and how cities around the world are handling new vertical development. (See newsletter brief.)

October 23

The NCS Geotechnical Executive Committee will host a luncheon from 11:30-1:30 at the Tysons

Corner Courtyard by Marriott in McLean, VA. Jeffrey Nelson, P.E., of Schnabel Engineering Consultants, Inc., will speak on "Innovative Use of Dredged Material Demonstration Project." **Reservations must be made by October 10.** Click [HERE](#) to register. Attendees will receive one Professional Development Hour (PDH).

November 19

NCS monthly meeting at the Hilton Arlington. The tentative program will be on a structural engineering topic. See the November newsletter for further details.

December 5-7

The DC Society of Professional Engineers will host the NSPE 2013 Northeast Regional Meeting & Mid-Atlantic Engineers Conference at the Loews Madison Hotel in Washington, DC. This event will provide a good opportunity to grab some additional PDHs before the end of the year. For additional information or to register, click [HERE](#).

January 6–10, 2014

The National Institute of Building Sciences hosts the second annual conference and expo, *Building Innovation 2014: Advancing Life-Cycle Performance*, in Washington, DC. The conference agenda will highlight NIBS activities and programs for developing innovative solutions for the built environment. For additional information or to register, click [HERE](#).

January 21

NCS monthly meeting at the Hilton Arlington. The tentative program will

be on a water/wastewater topic. See the November newsletter for further details.

February 22

Discover Engineering Family Day at the National Building Museum in Washington, DC. Contact Dean Westman (dwestman@wrallp.com) or Emily Dean (dean.emilyanne@gmail.com) for further information or to volunteer.

June 1–5

ASCE's Environmental & Water Resources Institute hosts the World Environmental & Water Resources Congress 2014: *Water Without Borders*, in Portland, OR. **Abstracts are due by September 20, 2013**, with student competition abstracts by October 11, 2013. For additional information or to register, click [HERE](#).

July 21–23

ASCE's Energy Division will host the Shale Energy Engineering Conference in Pittsburgh, PA, as a resource to present unbiased material to an informed group of industry professionals. **Abstracts are due by September 11, 2013.** 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*. **Abstracts are due by September 10, 2013.** For additional information, click [HERE](#). Registration opens in February 2014.

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