

Seismic Assessment of the Washington Monument and Washington National Cathedral

Erik C. Sohn, P.E., Senior Associate for Wiss, Janney, Elstner Associates, Inc., to present at January Section meeting

For our first dinner meeting of the year, the National Capital Section (NCS) is pleased to welcome Mr. Erik C. Sohn, who will be discussing the early-response survey efforts and subsequent design repairs for the Washington Monument and Washington National Cathedral following the magnitude 5.8 earthquake which shook the East Coast on August 23, 2011. Mr. Sohn helped to inspect both structures after the earthquake using rope-access techniques and has led design efforts for rehabilitation of these historic and iconic structures.



Although the 2011 Mineral, VA-centered earthquake was not considered to be major relative to other seismic events, it was reported as being the most widely-felt earthquake in U.S. history and has been the largest to affect the East Coast since 1944. The seismic vibrations caused unforeseen damage to numerous buildings in the Washington, DC area, specifically to older masonry structures which have little or no steel reinforcement to tie the stone pieces together. Soon after the earthquake, the National Park Service reported that a crack was discovered in one of the stones near the top of the Washington Monument and announced that the building would be closed indefinitely. Officials at the National Cathedral also reported damage to three of the four pinnacles (corner spires) on the central tower and the building was closed until damage investigations could be completed.

With extensive experience in historic buildings and earthquake-damaged structures, engineers at Wiss, Janney, Elstner Associates, Inc. (WJE) were tasked with evaluating both interior and

exterior seismic damage to these structures. Since the damaged areas on the exterior could not be easily assessed up-close using conventional approach methods, WJE called upon its Difficult Access Team, a group of engineers and architects at WJE that utilizes industrial rope-access techniques such as climbing and rappelling to survey hard-to-reach locations. As part of the Difficult Access

Team, Mr. Sohn will be presenting on the tasks performed by WJE, which ranged from the initial emergency response and make-safe operations, to development of repair designs based on inspection findings and evaluation of potential seismic upgrades. Design for the repairs was recently completed and issued for bidding, and the contractor is currently mobilizing to complete the repairs during the 2013 construction season.



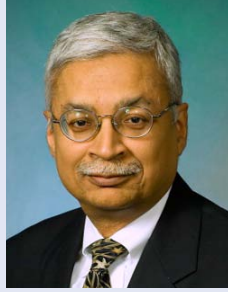
Mr. Sohn is a Senior Associate who has worked for WJE in the Washington, DC area for over 11 years, with extensive experience in the forensic investigation of building enclosure failures. He is a registered Professional Engineer with a degree in Architectural Engineering from The Pennsylvania State University.

Please join us for this exciting presentation on **Tuesday, January 15, 2013**. The meeting will be held at our usual meeting place, the Hilton Arlington, 950 North Stafford Street in 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 6:00 to 6:30 p.m., followed by dinner. The program will conclude by 8:30 p.m. The cost will be \$10 for students, \$40 for those who pre-register, and \$50 for walk-ins. **Please RSVP by January 10, 2013**. One Professional Development Hour (PDH) will be awarded to attendees. Click [HERE](#) to register. For questions, please contact Qamar Kazmi at qkazmi@sch-nabel-eng.com or 240-238-2218. ■

President's Corner

Happy New Year! Hope you had wonderful and safe holidays.

When I was a junior at N.E.D. Engineering College (now University) in Pakistan, one of my professors posed this question to our class: What do engineers do? I recall that a number of students tried to answer his question but he was not satisfied with the answers. Although he never gave me the chance to respond, I believe he was satisfied when someone gave an answer close to what I had wanted to say: "Engineers use knowledge to make the best use of available resources for the betterment of humankind." At a very basic level, that is what engineering is all about. Whether it is building a city's infrastructure, designing sustainable buildings, preserving historic



structures, or other tasks we undertake, we need to remember that at its core, it's all about the betterment of humankind.

We are indeed very fortunate to be in a profession that makes a positive impact on the society. In this context, I am always amazed by the extraordinary caliber of the civil engineers living and working in our midst, who do this day in and day out. In November, we were fortunate to have a presentation from one of the leaders of our profession: Ronaldo T. "Nick" Nicholson, the visionary Chief Engineer of the DC Department of Transportation discussed, among other things, DDOT's asset management efforts, making the best use of available resources for serving the needs of users of DC's transportation system.

Preserving our historic and irreplaceable landmarks is another aspect civil engineers get involved in. In our next section meeting, on January 15, 2012, Mr. Erik Sohn, P.E., a Senior Associate with WJE, Inc., will discuss his firm's evaluation of interior and exterior seismic damage to the Washington Monument and Washington National Cathedral in Washington, DC. These structures were damaged during the August 23, 2011 magnitude 5.8 earthquake centered in Mineral, VA – the most widely-felt earthquake in U.S. history and one of the largest to affect the east coast. The details of the program appear on the first page of this Newsletter.

Take care,



Qamar A. O. Kazmi, P.E.
President, ASCE-NCS

Volunteers Needed for Discover Engineering Family Day at the National Building Museum on Saturday, February 16th

The NCS needs volunteers to host our activity at this year's National Building Museum (NBM) Engineering Family Day. This annual event is enjoyed by thousands of children of all ages and their families. Volunteers will hand out materials and help guide attendees in the construction of sky scrapers. Structures will be tested with a wind load and superimposed dead load.

Volunteers for two shifts are needed. The first shift starts at 9 a.m. and the second shift starts at 1 p.m. Shifts are approximately 4 hours long, but volunteers are welcome to come in at any time and stay for as long as they like.

The NBM serves refreshments to volunteers throughout the day. The NCS will provide all of the needed materials. The NBM is at 401 F Street NW in

Washington, DC, easily accessible by the Metro Judiciary Square Red Line Station. Parking is available on streets in the neighborhood and at nearby public parking garages.

Contact Dean Westman at dwestman@wrallp.com or Emily Dean at dean.emilyanne@gmail.com to volunteer or for additional information. ■

Newsletter

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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.

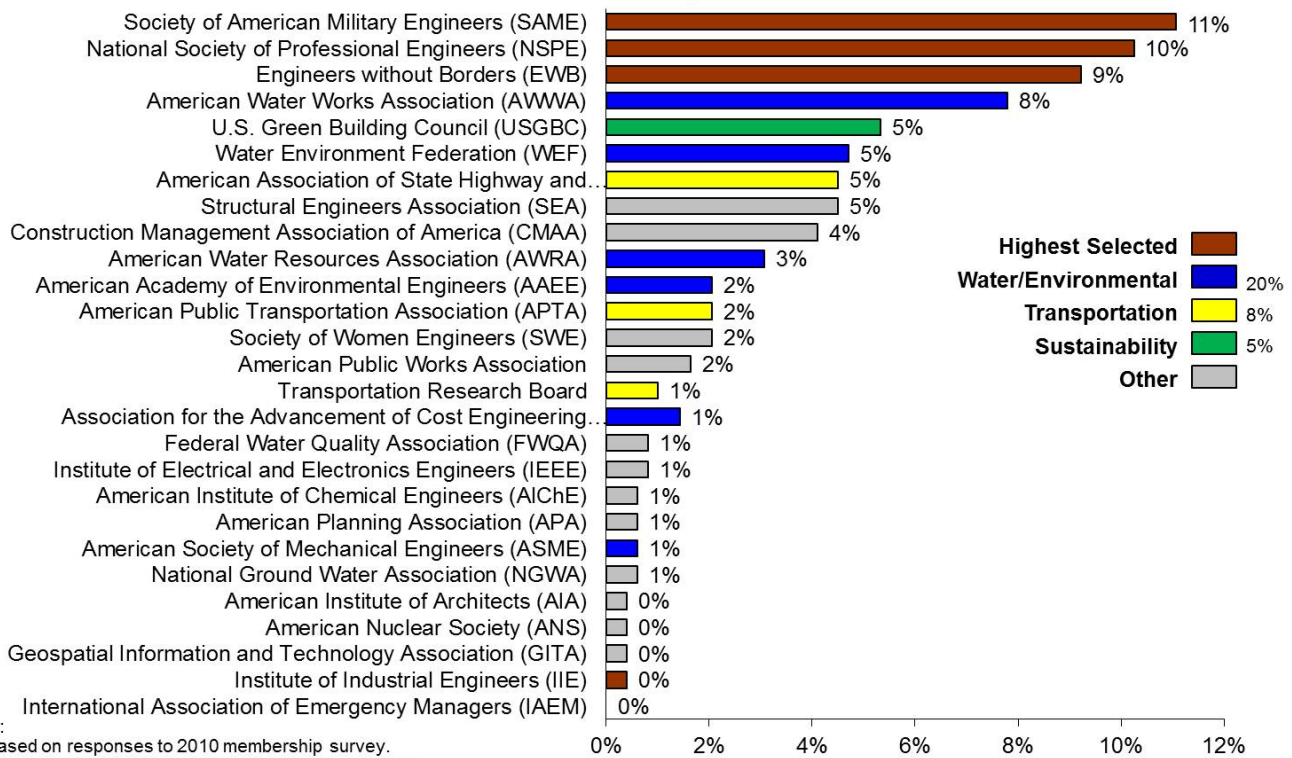
Improving the Value of ASCE-NCS Membership

In July 2010, the NCS commissioned a new Management and Best Practices Subcommittee to evaluate Section activities and identify means for optimizing the value of NCS membership. The Subcommittee interviewed NCS leadership, conducted a full membership survey, identified core interests, interviewed university faculty advisors and

young member representatives, and identified opportunities for partnering with peer organizations. Additionally, leadership from other ASCE sections was interviewed, and best practice reference materials were reviewed. The Subcommittee's findings were presented to the NCS Board of Directors in July 2011.

We are presenting graphical representations of the Subcommittee's findings as a monthly feature, "At a Glance...". For more information about the Subcommittee, please contact Christian Manalo at manalo_christian@bah.com. This month's graphic presents the range of technical organizations that NCS members are active in. ■

Members are active in many other associations, specifically SAME, NSPE, and Water/Environmental organizations



Notes:
 1. Based on responses to 2010 membership survey.
 2. Respondents were allowed to select multiple answers.
 3. Approx. 130 of 488 respondents noted they were a member of an association "other" than those listed.

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American Society for Quality Events at the 92nd Annual Meeting of the Transportation Research Board

On **January 14, 2013**, the American Society for Quality's Design and Construction Division (DCD) will hold a joint **Design and Construction Quality Meeting** with the Transportation Research Board (TRB), the American Road and Transportation Builders Association (ARTBA), the ASCE, and other interested organizations. The meeting will be held from 5:30 to 7:30 p.m. in the Congressional Room of the Marriott Wardman Park at 2660 Woodley Road NW in Washington, DC. This location is accessible by the Metro's Red Line from the Woodley Park/ Zoo Station.

The intent of the joint meeting is to foster discussion between the various groups that are involved in design and construction quality. These groups are primarily, but not limited to, the DCD, the ASCE Construction Institute, the ASCE Transportation and Development Institute, the TRB Design and Construction Group, and the ARTBA. The DCD is hoping to take advantage of the number of people who will be traveling to DC to attend the Annual TRB Meeting, or members of these organizations who live in the DC Metro area, or just practitioners who have an interest in this important issue. Anyone who is interested in design and construction quality is welcome and encouraged to attend. There is no cost to attend (TRB registration is not required to attend DCD events). The DCD will provide light snacks and beverages.

Please RSVP by e-mail to danny.kahler@kahlerengineering.com if you plan to attend so an approximate head count can be made. Phone contact is 512-983-3453.

(Note that registration for the Annual TRB Meeting, normally \$915, is **FREE** to employees of sponsoring organizations, which includes a number of Federal agencies and several non-profit transportation associations. See <http://www.trb.org/Finance/Sponsors.aspx> for a full list of sponsoring organizations.)

On **January 15**, the DCD will also sponsor a **lightning talk session** (also known as Pecha Kucha) on the subject of managing the quality of design and construction of infrastructure. This session is intended for students in academic programs related to the design and construction of infrastructure, as well as young professionals involved in managing the quality of either design or construction.

The session will be held from 5:45 to 7:30 p.m. in the Madison A Room of the Marriott Wardman Park during the Annual TRB Meeting.

Presentations will be limited to 5 minutes each, with no more than twenty (20) slides and no more than fifteen (15) seconds per slide. Because this session

is being sponsored outside the official TRB program, registration for the TRB conference is not required in order to participate or attend.

Presentation abstracts are not required; only a presentation proposal with a title, a one or two sentence description, name of presenter, email, phone, school, and academic major. Young professionals should also list which school they graduated from, what year, discipline of degree, job description, firm or organization, and professional certification or license (if any).

This is a chance for students and young professionals to meet seasoned professionals who are practicing in the transportation and infrastructure field, and present their ideas in a friendly non-judgmental environment (the DCD won't be handing out grades).

E-mail presentation proposals, or any questions you might have, to Erin Donovan, P.E., at e.donovan@delcan.com. The alternate contact is Danny Kahler, P.E., and Vice Chair of the DCD, at danny.kahler@kahlerengineering.com. ■

February NCS Meeting – Infrastructure and Transportation Congestion

The February NCS meeting will feature the unveiling of the Infrastructure Report Card for the Washington, DC, metropolitan area. The product of this long-term initiative by NCS members and students will be recognized. The keynote speaker for the evening will be Shirley Ybarra, a senior transportation



policy analyst at Reason Foundation and former Secretary of Transportation for the Commonwealth of Virginia. Her presentation will focus on the latest thinking in how states and municipalities are addressing transportation congestion and infrastructure funding in an uncertain political climate. ■

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Annual Award Nominations Request

Nominations Being Accepted

The Annual Awards Banquet is always one of the highlights of the NCS year because it allows us the privilege of honoring and celebrating individuals who have contributed to our society and our community. Individual awards include:

- Community Service Award,
- Meritorious Service Award,
- Life Member Awards,
- Student of the Year Awards, and
- Student Scholarship Awards.

We are currently requesting nominations for the following three annual awards:

Community Service Award

The Community Service Award recognizes contributions to enhance community life. *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 3-year period preceding the nomination.

Meritorious Service Award

This award recognizes outstanding contributions to the Section. *The nomination shall briefly describe how the member contributed time and talent for the benefit of the Section, and how he/she sets a high standard of professionalism through service.*

Outstanding Civil Engineering Project of the Year

This award recognizes a civil engineering project in the National Capital region which demonstrates high skill, contributes to civil engineering progress, and is substantially completed within the preceding 3 years. Selection criteria are:

- contribution to regional quality of life,
- resourcefulness in planning,
- resolution of design problems,
- pioneering use of materials and methods,
- innovation in construction,
- impact on the physical environment (i.e., sustainability), and
- aesthetic values and/or unique aspects.

Click [HERE](#) to download the outstanding project nomination form. Please submit letter or e-mail nominations by **January 31, 2013** to:



John Casana, P.E., Chair
ASCE-NCS Awards
Committee
Booz Allen Hamilton
8283 Greensboro Drive
McLean, VA 22102
casana_john@bah.com

2013 ASCE-NCS Sustainability Award Nomination

The 8th 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 (2012), the award recipient was the Architect of the Capitol.

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, 2013**. 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 March 2013. Anyone interested in becoming involved with the Sustainability Committee please feel free to contact Mr. Rosenheim. ■

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November Meeting Recap – DDOT Asset Management and Bridge Program

Presented by Renando “Nick” Nicholson, P.E., DDOT Chief Engineer

The attendees at the November 2012 NCS meeting heard Renaldo “Nick” Nicholson, P.E., discuss asset management for transportation infrastructure. Nicholson, the Chief Engineer for the District of Columbia’s Department of Transportation (DDOT), gave an insider’s account of the history and outcomes of the performance-based contracting initiatives in the District. Nicholson also discussed bridge maintenance and new bridge projects in DC.

From the perspective of leading the agency that is responsible for the maintenance and preservation of DC roads, Nicholson described the conditions that brought about performance-based contracting. Loss of internal resources due to retirements, the Federal Highway Administration’s participation as a funding partner, and the need to create local employment were factors that allowed DDOT to undertake an experimental program in 2000 that gave maintenance responsibility to the private sector.

Performance monitoring was a key to the program, to ensure the desired outcomes were being met. A rigorous system of performance measures and monitoring inspections was put in place to validate the contractor performance. The expectations of the contract were:

- substantial increase in maintenance activities on all of the maintenance elements,

- the performance measures for each of the maintenance elements were targeted to be met (on average) at the end of the second year,
- the assets will be maintained at or above the performance measures for the remaining three years, and
- the general level of satisfaction will increase toward “full performance satisfaction”.

Nicholson reported that the experimental period was judged a success, generally resulting in cleaner, safer, and more predictable maintenance outcomes.

He then described the performance-based contract for tunnel maintenance. Utilizing experience gained from the DC Streets program, DDOT established a similar program for tunnel maintenance in 2007. Because of the unique skills required for tunnel maintenance activities, the need to manage the owner’s risk, and control cost, tunnels assets were judged to be a good candidate for the performance-based service approach. The services included in the contract were: structural, mechanical, electrical, lighting, and management. Overall, Nicholson reported that the program was judged successful for the tunnels, albeit acknowledging the results may come at an increased cost compared to being provided in-house. One of the criteria for the statement



Nick Nicholson, P.E., Chief Engineer for the District of Columbia’s Department of Transportation.

was that the capital renewal timing for the assets is now based on structural condition, because the mechanical and electrical systems are better maintained than in the past. Nicholson even put the question to the audience, “Do you think the tunnels in DC are in good condition?” He answered his own question, “I think they are.”

Nicholson spent the remainder of the program discussing DDOT’s bridge program. He discussed the 11th Street Bridge reconstruction, a \$260 million design-build project to replace the structurally deficient structures originally constructed in the 1960s. The winning

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Artist’s rendering of the new Frederick Douglass Memorial Bridge.

NCS Committee News and Updates

Sustainability Committee Visits the NIST Net-Zero Energy Residential Test Facility

On November 1, 2012, the NCS Sustainability Committee arranged for a guided tour of the Net-Zero Energy Residential Test Facility at the National Institute of Standards and Technology (NIST). Dr. Hunter Fanny, the Technical Director for the project and the NIST Energy Laboratory's Energy and Environment Division Chief, graciously



Left: The NIST Net-Zero Residential Energy Test Facility is a typical-looking house with a detached garage. Note solar panels on upper roof.

Right: Dr. Hunter Fanny addresses Committee members in the detached garage where monitoring equipment will record conditions inside the house without contributing heat.

volunteered to personally guide a dozen attendees through the prototype site.

The unique facility looks and behaves like an actual house, and has been built to U.S. Green Building Council LEED Platinum standards – the highest standard for sustainable structures. The two-story, four-bedroom, three-bath test facility incorporates energy-efficient construction and appliances, as well as energy-generating technologies such as solar water heating and solar photovoltaic systems.

Results from this facility will demonstrate if net-zero energy home design and technologies are ready for typical contemporary residential neighborhoods. The vast majority of the components of the house were specifically chosen to be readily available off-the-shelf items. It will also allow development of new design standards and test methods for emerging energy-efficient technologies to allow the public to be educated with objective criteria on the costs and benefits.

The test facility was funded by the American Recovery and Reinvestment Act of 2009, which included green technologies among its priorities. The facility was built almost entirely with

U.S.-made materials and equipment. Through its Building America effort, the Department of Energy provided architectural design, training and management support for this project.

For the first year of its operation, the lab will be used to demonstrate net-zero energy usage. NIST researchers will use computer software and mechanical controls to simulate the activities of a family of four living in an energy-efficient home. No actual humans will be allowed to enter the house during this time so that researchers can monitor how the house performs, but lights will turn on and off at specified times, hot water and appliances will run – and small devices will emit heat and humidity just as people would.

A solar photovoltaic system will generate electricity to power lights and appliances when weather permits, and excess energy will be sent back to the local utility grid by means of a smart electric meter. The house will draw energy from the grid on days it cannot generate enough on its own, but over the course of a year it has been designed to produce enough to make up for that purchased energy, for a net-zero energy usage. ■

November Meeting Recap – DDOT Asset Management and Bridge Program

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team (a joint venture of Skanska USA Civil of Alexandria, VA and Facchina Construction of La Plata, MD) also included corridor improvements and multi-modal transportation options for the project.

The presentation ended with a discussion of the new Frederick Douglass Memorial Bridge, part of the South Capitol Street Corridor Project. The project is planned to have two phases, with the first to include replacement of the 63-year-old existing bridge that is structurally deficient (although Nicholson was clear that a bi-yearly inspection program insured the safe conditions for the public). The project includes a moveable span bridge, bringing the Phase 1 cost of the project to \$660 million. If approval of a fixed-span bridge can be obtained, a savings of \$140 million is estimated, as compared to the moveable-span bridge. The schedule for Phase 1 is to select design-build teams in 2013 and begin construction of the project in 2014. ■



Girl Scout Day at the National Building Museum

Volunteers from the NCS participated in Girl Scout Day at the NBM on Saturday, October 20, 2012.

This year, we helped Girl Scouts, Brownies, and Daisies build arch bridges out of straws, paper clips, and lots of scotch tape. The final step in the bridge building exercise was testing of the bridges by loading the

cardboard bridge decks with tiny masonry units.

The goal was fun, but more importantly, a gentle lesson about the great strength of arches and the joy of engineering was imparted to the girls.

A dozen NCS volunteers were able to spare some time on Saturday to help raise awareness about engineering with

this generation of younger elementary school students.

Our next volunteer activity at the NBM will be Saturday, **February 16, 2013, for Discover Engineering Family Day**. See this edition of the newsletter for further information. ■



Is It Prime Time for Civil Engineers in Popular Entertainment?

A Newly Released Thriller Makes a CE the Hero

By Stefan Jaeger, author of *The Jackhammer Elegies*

If you try to count the number of movies that have an engineer as a major character, you probably won't get off the fingers of one hand. I know of *Arlington Road* (the engineer, played by Tim Robbins, is a terrorist), *Falling Down* (the engineer, Michael Douglas, goes berserk), and *Mr. & Mrs. Smith* (the cover profession of the assassin, Brad Pitt, is an engineer), just to name a few. The problem with these is that the silver screen engineer hardly fits the bill as someone you'd want to invite home for dinner.

Movies are of course only one genre. In the nearly 27 years I've worked with engineering associations, the last 7 at ASCE, the most repeated refrain I've heard from engineers is, "Why can't we have a TV show like *L.A. Engineer?*" (For those of a younger generation, *L.A. Law* was a popular TV series in the late '80s and early '90s that featured a cast of characters from a law firm in Los Angeles.) I do recall a TV drama series from either Australia or South Africa that centered on a civil engineering firm. I got hold of an episode on video cassette, but I can't say it was the best-made show I'd ever seen. I'm sure the budget wasn't too big either.

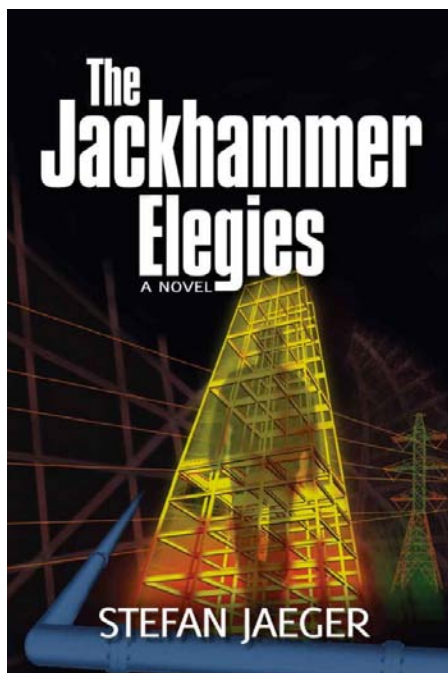
The problem with popular entertainment (or the attraction of it, depending on your point of view) is that you often have to toss in sex, violence, intrigue, and oddball personalities to get an audience. For a civil engineering firm setting, that might imply you have to

make the firm's engineers corrupt, or have bad designs kill people, or fill the office with philanderers to give it the *L.A. Law* treatment. The possibilities are of course limitless, but that might not be the image you'd want to project for CEs.

Nevertheless, that refrain of *L.A. Engineer* stayed with me, and given my ongoing interest in writing fiction, I got to wondering whether I could write something to address the popular entertainment void for engineers. That speculation, after a long off-and-on road, resulted in my newly released thriller *The Jackhammer Elegies*, which features a civil/structural engineer as the main character and hero.

The effort is not without precedent. A number of other novelists have written on engineer-related topics, and many of those authors have been engineers themselves. One example that comes to mind stems from my days as editor of NSPE's *Engineering Times* in the late '90s – the novel *Engineered for Murder*, by Aileen Schumacher, P.E. The mystery, which I read with great interest for an *ET* review, featured a professional engineer heroine working in an engineering setting, to whom Schumacher

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Is It Prime Time for Civil Engineers in Popular Entertainment?

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then gave additional starring roles in follow-up books.

I started planning my novel in the '90s, getting my initial plot hook from a story I heard about a New York City professional engineer who'd been caught in an elevator after the first World Trade Center bombing in 1993 and his ordeal in getting out. A fictionalized version of his experience became the opening scene in *The Jackhammer Elegies*, where the location is transported to Rosslyn, VA, and the man trapped is Scott Carter, a structural engineer who had designed the steel frame for the building. In the novel, that powerful basement blast rocks Carter from his everyday life into the media limelight – and ultimately into the crosshairs of a technically cunning terrorist. Carter's knowledge of the building's structural framework helps him alert the city about potential collapse, but that turns him into the conduit of threats from the mastermind of the attack, alias Jackhammer. Carter becomes a consultant to the FBI as it investigates the engineering angles to the case, teaming up with Special Agent Michelle Taylor, whose striking presence pulls Carter into the complications of a growing love. The partners soon find themselves matching wits with an elusive mastermind targeting the lifelines of a city's public works.

A first draft took about 2.5 years, but marketing the book to literary agents got put on hold when the tragedy of 9/11 struck. The dark mood of the nation meant no one had an appetite for stories involving terrorists, and it would take years before movies and fiction ventured into the subject matter of 9/11 itself. I put my book on ice and worked on other fiction projects, taking *The Jackhammer Elegies* out of the drawer for some revision in 2003, and then getting serious late last year with a major revision and upgrade. In that recent push, two well-known CEs and two senior ASCE staff agreed to read the manuscript and provide feedback, which led to a better novel.

Besides trying to build an engaging plot, I hoped to paint the world of civil and professional engineering through Carter's character and his active participation in ASCE activities. Like so many CEs and P.E.s I've met over the years, Carter holds a keen conviction that engineers need a higher profile in society. He champions infrastructure renewal

and sustainability, qualifications-based selection of engineering services, and raising the bar on the education required to get the P.E. license of the future. Carter also speaks out in public forums to raise the stature of engineers.

In the same way that a John Grisham novel provides insights into the legal profession, I tried to weave in aspects that show the world in which Scott Carter travels, be it engineering licensure and licensure boards, private practice firms, or National Engineers Week. The vulnerability of our nation's infrastructure becomes an overriding theme.

In these sidelights to the book, I didn't want to whitewash the profession and portray Carter as an idealized figure. He fights self-doubts about his move into management to make more money when his true passion is design, and health issues can at times undermine his confidence as he faces the stresses of his hunt for the public works terrorist. As one P.E. reviewer of the novel said, "The book ... portray[s] the engineering profession with all of its strengths, weaknesses, and foibles."

You may be asking yourself whether I'm an engineer. I'm not, but I did start my adult life with a physics and astronomy degree, so I've enjoyed the ability to relate to technical questions even though my work with engineers has generally been focused on professional and policy issues. While I enjoyed bringing those issues into my book, the one aspect that provides a bit of unease is that in promoting the novel I'll come across as simply wanting to make a buck through book sales. A real part of the fun is getting a story about CEs and P.E.s in front of engineers and the public. I'm guessing my experience might parallel that of CEs who testify before Congress on the critical need for renewing our nation's infrastructure. The engineers are pushing for something from a standpoint of the public, but there's no guarantee some congressman won't accuse them of lobbying for funding that will put money in their pockets through more demand for civil engineering design work. There's no obvious way to completely avoid that trap.

The engineers who created the new self-publishing technology that I used for my book would certainly have gotten kudos from Carter, who later in

the novel tells of his forays into grade school classrooms to promote engineering careers and engineers' contributions to society. (He uses a rip-off of *A Christmas Carol* to show what a fearful world we would live in without the work of engineers.) Just consider: To get an e-book up for global sales (once all the text formatting is finalized) can take just an hour, with a Kindle or a Nook Book version then appearing in the online catalog, later with look-inside samples. Creating the paperback version is a technology to behold. Once you've done design for your cover and text (not necessarily a small task if you want to do it professionally), you upload those electronic files and then receive a digital proof where you turn pages on screen to check formatting and alignments. Once approved, that electronic file goes into a print-on-demand hopper, and any time someone orders the book, the press spits out an individual copy, bound and put in the mail, not only in the U.S. but in Western Europe as well. No more risky investments on inventory that might not be sold, and no cost to the author for the service. The self-publishing house simply gets a cut on the sale price of each book sold on Amazon.com. It's truly amazing how far engineers have taken us, and the progress is only accelerating, as any engineer knows when witnessing the latest tools in their own profession.

I only hope my thriller can do its part in sending more of that message and shining that spotlight a bit brighter on CEs and ASCE. ■

Editor's Note: Stefan Jaeger, CAE, serves as Managing Director of Member & Corporate Communications at ASCE Headquarters in Reston, VA, following a 1986–2005 tenure on the NSPE headquarters staff. He can be reached at sjaeger@thejackhammerelegies.com. His novel is available on Amazon.com (paperback and Kindle), where you can find [reader reviews](#), and on BN.com (Nook Book).

Upcoming Events *(Also available on the NCS website under the Events tab)*

December 1

Release of the draft 2013 National Climate Assessment. Additional information is available at <http://assessment.globalchange.gov>. (See November 2012 newsletter brief.)

December 6–7

ASCE Continuing Education Seminar “Seismic Loads for Buildings and Other Structures” to be held at the Holiday Inn Central, 1501 Rhode Island Avenue, Washington, DC. Earn 1.4 Continuing Education Units (CEU). For more information, click [HERE](#).

December 11–12

ASCE presents Sustainable Project Management: Delivering Projects for a More Sustainable Infrastructure at its World Headquarters in Reston, VA. Become conversant in the new Envision™ rating system and pathways for application to infrastructure projects. Earn 1.2 CEUs. For more information and to register, click [HERE](#). (See November 2012 newsletter article.)

January 9, 2013

The NCS Geotechnical Executive Committee will host a presentation by Larry D. Olsen, P.E., on Nondestructive Evaluation of New and Existing Foundations. 11:30–1:30 p.m. at

Maggiano’s, Tysons II Mall in McLean, VA. Earn 1 PDH. \$45 (\$35 if paid by Jan 3); \$10 for students. Click [HERE](#) for reservations or contact Kellie Owens at 703-771-9844.

January 14

Joint Design and Construction Quality Meeting of the American Society for Quality’s Design and Construction Division (DCD) at the 92nd Annual Meeting of the Transportation Research Board. 5:30–7:30 p.m. at the Marriott Wardman Park Hotel, 2660 Woodley Road NW, Washington, DC. For more information, contact Danny Kahler at danny.kahler@kahlerengineering.com. (See newsletter article.)

January 15

The DCD will sponsor a lightning talk session on the subject of managing the quality of design and construction of infrastructure. 5:45–7:30 p.m. at the Marriott Wardman Park Hotel, 2660 Woodley Road NW, Washington, DC. For more information, contact Erin Donovan at e.donovan@delcan.com or Danny Kahler at danny.kahler@kahlerengineering.com. (See newsletter article.)

January 15

NCS monthly meeting at the Hilton Arlington. The featured speaker will

be Erik Sohn, P.E., Senior Associate at Wiss, Janney, Elstner Associates. Mr. Sohn will speak on his participation in the assessments of seismic damage conducted at the Washington Monument and Washington National Cathedral following last year’s earthquake. (See newsletter lead article.)

January 24–25, 2013

ASCE Continuing Education Seminar “Project Management” to be held at the Embassy Suites Hotel Center City Philadelphia. Earn 1.5 CEUs. For more information, click [HERE](#).

February 16, 2013

Discover Engineering Family Day at the National Building Museum in Washington, DC. The NCS will be staffing a table to introduce kids of all ages to the fascinating world of civil engineering. Volunteer and join in the fun! Additional details can be obtained from Emily Dean at EDean@mragta.com or Dean Westman at dwestman@wrallp.com. (See newsletter brief.)

February 19

NCS monthly meeting at the Hilton Arlington. The featured speaker will be (speaker and topic to be filled-in later).

Employment Clearinghouse

Position Available

Sediment and Erosion Control

Plans Reviewer: the Anne Arundel (MD) Soil Conservation District seeks an entry level civil engineer. Candidate should have a degree in engineering or equivalent degree and experience in sediment and erosion control design. Salary: \$46,369 with benefits. Send

your resume, cover letter and transcripts to cmaex@ascd.org.

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 or would like to post a position, please contact the Employment Conditions Committee, National Capital Section ASCE, 8502 Buckhannon Drive, Rockville, MD 20854-3503; phone: 301-983-9777; fax: 301-983-1953; or e-mail sassi22@verizon.net.