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T&DI Boston Chapter / Transportation

MaineDOT Route 1 Reconstruction, Ogunquit, ME

by Ernest Martin, MaineDOT Project Manager; Jeff Finitz, PE, Louis Berger Portland Office Manager, Tim Higginson, Louis Berger Project Manager; Lynn Farrington, PE, Traffic Task Leader

Ogunquit, ME, home to the Ogunquit Play House-"America's foremost summer theatre," 3.5 miles of white sandy beaches, the 1.25 mile Marginal Way, picturesque Perkins Cove, and numerous artists and musicians, is considered one of Maine's most beautiful and populated summer destinations. Route 1, through Ogunquit, is also considered one of Maine's most traveled two lane Main Streets, which has taken a significant toll on Route 1 over the years. That's why MaineDOT has embarked on a major project to reconstruct Route 1 and build two new bridges, over the Ogunquit and Josias Rivers. At the same time, the sidewalks and streetscape at the heart of the village are receiving a major facelift. The end result is a truly "Complete Street" with bicycle accommodations and beautiful spacious brick sidewalks on both sides of Main Street in the heart of town.

Louis Berger's Portland, ME office was selected by Maine DOT to provide the design and construction phase services of 2.3 miles of roadway



Reconstructed Route 1 at the Ogunquit Playhouse Entrance

safety, sidewalk, and drainage improvement along the corridor. This \$13.5 million project involves the construction of two new bridges, over 6.5 miles of drainage work, 2.3 miles of roadway reconstruction, over 3 miles of brick and paved sidewalks, landscaping, and decorative light fixtures in the downtown area. The Town of Ogunquit was very involved and supportive of the endeavor and provided the funding for the *continued on page 2*

UPCOMING EVENTS

T&DI Boston Chapter Webinar October 19, 2016

Engineering Management Group Seminar October 20, 2016

Younger Member Group Information Session October 26, 2016

ASCE and BSCES Sponsored Seminar November 3 – 4, 2016

SEI Boston Chapter Dinner Meeting November 9, 2016

168th BSCES Annual Awards Dinner November 14, 2016

Program Committee Sponsored NHI Training November 29 – December 2, 2016

Program Committee Sponsored NHI Training February 14 – 16, 2017

Further Details Inside



2016-17 Society Sponsors:



President's Report

by Brian A. Morgan, Esq., Legal Counsel, CDM Smith Inc.



As president of the Boston Society of Civil Engineers Section/ASCE, I would like to welcome you to a new year as we kickoff a full calendar of activities aimed at providing technical programs, networking

events, and diverse member services. I am honored to serve as this Section's president and I hope that you take advantage of the professional development opportunities offered throughout the upcoming year.

Being the oldest engineering society in the United States, we have built a great organization and are

very fortunate to have substantial resources. Our achievements have been recognized nationally. We received the Outstanding Section and Branch Award for Very Large Sections and Branches from ASCE four of the past five years and were recently named the recipient of the 2015 ASCE Section and Branches Diversity Award.

Very few sections within ASCE offer the breadth of services that our Section provides. With over 3,400 members across the Commonwealth, BSCES has a total of eight technical groups and institute chapters, ten committees, ten student chapters and a Western Massachusetts Branch that BSCES members are welcome to join. BSCES is the only section that publishes an engineering journal and has its own television show. Throughout the year, we support a legislative fellow who serves as a staff member to the Massachusetts Legislature's Joint Committee on Transportation. Each year, BSCES sponsors awards, donations, prizes, scholarships, and grants which exceed \$40,000. Beyond our technical program, BSCES members are volunteer participants with Engineers Without Borders, the Middlesex Fells Cleanup, and the Greater Boston Food Bank, among others. We also host a variety outreach activities geared to

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Louis Berger

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BSCESNEWS

MaineDOT Route 1 Reconstruction

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Landscaped Wall and Brick Sidewalk

streetscape and nearby park efforts as well as the upgrading of sidewalks to brick material. Public outreach and stakeholder input was extremely important to the Department, Louis Berger and the project to ensure that the final project, as well as construction, was a success.

Design started in August 2011 and was completed in the fall of 2014. Construction started in the winter of 2015 and is expected to be completed on or around November 2016 two months ahead of schedule. In an attempt to mitigate impacts to the traveling public, which increases significantly from Memorial Day through Labor Day, Maine DOT has shut down the construction operation Memorial Day weekend and from June 21st thru Labor Day Weekend. This alternative was discussed regularly with the public and, while unusual, was truly necessary for local tourism and businesses.

The 2.3 mile section of roadway is the primary route in the town. It provides access to numerous commercial establishments in a scenic corridor classified as an "urban minor arterial." It also serves as a pass through route for area-wide



Completed Brick Sidewalk and Tree Well

travel and freight transportation. The traffic volume increases from fewer than 10,000 vehicles per day (vpd) in the off-season to more than 22,000 vpd during tourist season.

The existing roadway had an original, concrete base overlain and widened with bituminous surfaces, resulting in limited curb reveal to separate the sidewalks from the roadway and control stormwater runoff. The pavement was in need of improvement, due to both reflective cracking and delamination. Additionally, the sidewalks were inadequate for the volume of pedestrians in this resort community. They were in poor condition, narrow, discontinuous, and non-compliant with ADA criteria. Other streetscape improvements include improved lighting, landscaping, and street furnishings. Louis Berger also identified improved bicycle provisions (e.g., a widened shoulder in the design where allowable). The firm proposed signing and marking improvements to advance roadway safety.

Stormwater design for the corridor involved the full replacement of the limited existing closed drainage network with expansion to collect

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MaineDOT Route 1 Reconstruction

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extended sidewalks and curbing. Drainage design was a challenge considering the growth and development over the years along the frontage of the corridor. The existing concrete road core complicated the location of proposed drainage trunk line; utilities had filled available area along the edge of the concrete slab. The result was a myriad of intermixed abandoned and active utility lines which the closed drainage improvements were designed in, over and around. Closed drainage system outlets, which in some cases existed through abutters basements, were completely revamped to be located within existing or obtained rights of way for future maintenance. Drainage outlet locations were considered, evaluated to minimize impact and designed to incorporate native plantings, stabilize stormwater flows and minimize erosion in this sensitive oceanfront location.

President's Report

continued from page 1

the K–12 community including tours of Boston bridges, the Future City Competition, Model Bridge Contest, and Online Bridge Contest.

There are many more programs that BSCES offers and I would encourage you to explore the organization and participate in upcoming events and/or join a technical group or institute chapter. This year we are on target to host close to 40 technical group or institute chapter events that will help you take advantage of your membership and help build the engineering community.

I would like to take this opportunity to recognize the efforts of staff at The Engineering Center Education Trust ("TECET") who work hard to support the Section's programs and services. We are fortunate to have such support, which helps our Society stand out within ASCE. Earlier this summer, Anthony Puntin – BSCES' executive director – decided to pursue new opportunities. We are very grateful for his dedication to the organization that he provided during his fiveyear tenure. He was instrumental to our success.

My focus this year will be on steering BSCES to ensure that we can sustain our great member benefits for years to come. Under a "business as usual" approach, we typically would offset any In the past 30 years, the Town of Ogunquit experienced substantial growth prompting significant, impermeable, upland development with minimal control over stormwater discharges. The limited existing drainage systems are a combination of closed systems in disrepair and shallow open drainage. Existing closed systems typically run off-site beneath private property without official easements. The modern drainage system captures and convey upland drainage and roadway stormwater via planned and designed outlets while minimizing right-of-way costs as directed by the Department.

Construction Cost: \$13.5M

Contractor: Grondin & Sons, Gorham, ME Construction Award Date: Feb/March 2014 Target Completion Date: December 2016 Percent Complete: 75%



Temporary Route 1 Bridge

projected operating deficit in the budget with money from our managed funds. Recent years have been challenging as revenue has not always covered the Society's expenses at year-end. However, this year to combat this problem we are making a few significant changes. First, we elected to restructure the services offered by TECET by not filling the role of executive director and by streamlining certain services TECET offers BSCES. Richard Keenan will be the Society's association manager. With these changes, our Section will realize a significant cost savings, which allows us to reduce our projected deficit. Creating a Society business model that is based on a near balanced budget will ensure that our Society will offer great programs for years to come.

Second, the Finance Committee revised the BSCES Sponsorship program. By streamlining the program, we are able to offer more advantages to two new categories of sponsors —Society and Program Sponsors. Through increased solici– tation and the revised program, we have increased the revenue obtained through sponsorships. Thus, we have been able to further reduce the annual deficit.

Third, I will continue to work with all facets of the organization to challenge the status quo and create new programs and resources while focused on a sustainable business model. Thus, building on our member's accomplishments and leader– ship, particularly BSCES Past-President Ellen White, our Executive Committee members, and our technical group and institute chapter chairs who comprise the BSCES board of Government and are listed on page 2 of this newsletter.

I would like to invite you to attend the 168th BSCES Annual Awards Dinner on November 14th at the UMASS Club in Boston. The keynote speaker is former Massachusetts Governor Michael Dukakis. The evening will include recognition of BSCES award recipients. Please see our website events page for more information about this and other events.

I would like to thank our 2016-2017 Society and Program Sponsors that are instrumental in financially supporting our organization. You will find a listing of these organizations in this issue's Recent News and Updates column on page 7. I would especially like to recognize and thank Society Sponsor Louis Berger, which is the sponsor of this newsletter, and encourage you the read their page 1 article entitled MaineDOT Route 1 Reconstruction, Ogunquit, ME. The Transportation & Development Institute Boston Chapter is the feature group of this issue and I would also encourage you to learn more about the group by reading the page 5 article by T&DI Boston Chapter Chair Bryan Zimolka, PE, Howard Stein Hudson.

I am looking forward to seeing you at future events!

BSCES Legislative Fellow Update from Beacon Hill— An Act Financing Municipal Roads and Bridges

by Michael Sullivan, PE, Senior Bridge Engineer, Collins Engineers, Inc., 2015–2016 BSCES Legislative Fellow



The legislative session of the 189th General Court of Massachusetts came to an official end on July 31st and with it, a flurry of activity over a handful of bills with direct impact to the

civil engineering community. One of these bills, <u>H.4424</u>, was signed into law by Governor Baker in August. The new law is Chapter 220 of the Acts of 2016 - An Act Providing for the Financing of Certain Improvements to Municipal Roads and Bridges. In addition to funding \$750,000,000 for MassDOT Highway Division projects, the law included \$50,000,000 for a newly created Small Bridge Program and made changes to the existing Complete Streets Program.

The Small Bridge Program will provide municipalities an additional funding mechanism

to assist with design, construction, preservation, or reconstruction of municipal owned bridges that don't qualify for federal aid. In general, these bridges are classified as municipally-owned structures with spans less than 20 feet. These include both bridges and culverts and the program will help municipalities cover expenditures for engineering, permitting, and other services essential to the projects.

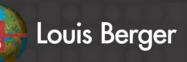
MassDOT is expected to develop a selection plan that takes into account need-based criteria and geographic distribution. This plan is expected to be filed with the Joint Committee on Transportation and the Clerks of the House and Senate by September 1st. Governor Baker used his line-item veto powers to strike the provision from the law stipulating that not more than 20 percent of the funds expended shall be distributed to projects in any one MassDOT Highway District. This veto is expected to help many of the communities in the western part of the state where a significant number of municipally-owned structures that are less than 20 feet long are located. Applications for the first round of funding are expected to be available to municipalities on September 1st. Applications will be due by October 31st with an anticipated award date in January.

The law also included changes to the existing Complete Streets program. To be eligible for funding, a municipality must apply through MassDOT, adopt a Complete Streets by-law ordinance, have municipal employees attend a MassDOT training, and develop a complete streets prioritization plan.

BSCES Seeks 2017–2018 Legislative Fellow

by David Westerling, PhD, PE, PLS, Emeritus Professor, Department of Civil and Mechanical Engineering, Merrimack College and BSCES Legislative Fellow Committee Chair

The Legislative Fellow is a BSCES member who serves as a technical resource at the Massachusetts State House. The Legislative Fellow generally works with the staff of the Joint Committee on Transportation on current issues that can benefit from the input of an engineering professional. Most efforts focus on transportation or environmental initiatives but can vary. A Legislative Fellow has the ability to solve real world problems at the State House that impact the Commonwealth. This highly visible position also provides the participant an opportunity to serve the public while giving back to BSCES and the civil engineering profession. Other benefits include office space at the State House, access to State House News Service, access to state house tours, attendance at legislative conferences, access to the legislative chamber, and the ability to meet and work with our legislators. Legislative Fellows develop a further appreciation of how rules and regulations are developed. The Legislative Fellow receives a stipend from BSCES dependent on time of service. The application deadline is October 31, 2016 for the Fellowship year beginning in early February 2017 and ending on July 31, 2018, the probable end of the legislature's formal session in 2018. For more information, visit the <u>BSCES</u> Legislative Fellow page on the BSCES website and see the application process. You may also contact Rich Keenan with further questions at 617/305-4110 or rkeenan@engineers.org.



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Featured Group

Achieving Success with T&DI Boston Chapter Expansion

by Bryan Zimolka, PE, Howard Stein Hudson and Chair, Transportation and Development Institute Boston Chapter

As we move into the 2016–2017 year, the Boston Chapter of the Transportation and Land Development Institute (T&DI Boston Chapter) is building on last year's success and planning more social, technical, and networking events. As the summer season ends, the chapter's executive committee is putting the finishing touches on the year-long effort to plan this year's approach to events, meetings, communications, and operations. The goal for this year is to improve the social atmosphere of the chapter and enhance media presence while maintaining the technical and signature events that the chapter has built.

On June 15th, a group of BSCES members met after hours for the final meeting of the 2015– 2016 year at the American Fresh Brewhouse at Assembly Row in Somerville. This meeting was another step towards improving the social atmosphere of the group that we strived to establish throughout the 2015 – 2016 year. We discussed the successes of all the events and meetings, as well as ways to enhance the T&DI Boston Chapter's presence in the engineering community.

Back on May 20th, we hosted the annual Bertram Berger Seminar at the Courtyard Marriott Downtown Boston. 130 people gathered to hear from a total of 11 speakers who were all asked to offer their comments on the seminar's theme of *A New Focus for Growth Around the Commonwealth.* Similar to years past, the event was broken out into two separate panel discussions followed by a lunchtime program, which was capped with a presentation from our distinguished keynote speaker, MassDOT Highway Administrator Thomas Tinlin.

Panel one speakers focused on the targeting of areas for land development and the planning process that is involved in determining the appropriate land use regionally and locally. Sara Myerson, the executive director of planning for the Boston Redevelopment Authority, provided an overview for the development around Boston and provided great examples for the strategic planning areas associated with the Imagine Boston 2030 master plan.

Panel two speakers focused on specific project locations that involve large scale land developments and associated infrastructure improvements. Mike O'Dowd, project manager for the MassDOT Highway Division, and Joe Beggan, senior manager of transportation from the Harvard Planning Department, discussed the Allston-Brighton Interstate 90 Interchange Improvement Project and the impacts the roadway realignment will have on the adjacent Harvard parcels. It was a great example of how a public agency can collaborate with a private entity to improve the city from an infrastructure and land development standpoint.

The Berger Seminar is known to be the signature event of the Transportation and Development Institute Boston Chapter, however it is only one of numerous events hosted by the group. Last year members also organized a lunchtime legislative update on state of affairs with transportation funding. Building on the success of the webinars hosted by the T&DI Boston Chapter from the 2014–2015 year, which were the first of its kind for BSCES, a webinar on the *Critical Elements of Roundabout Design* was hosted on November 18th featuring Andy Paul from Kittelson & Associates, Inc.

On September 13th, we held our first meeting of the new fiscal year for all interested committee members to discuss a full agenda of T&DI Boston Chapter action items for the upcoming year. During this meeting the executive committee provided more information about this year's planned T&DI Boston Chapter events, set meeting schedules, and discussed members' personal goals and how they would like to enhance their presence within the engineering community. The current list of event opportunities is:

- Kayaking on the Charles River Summer Activity (September 17, 2016)
- Technical Webinar #1 (October 2016)
- Fall Social (October 2016)
- Bicycle Facility Design Training Course (October 2016)
- Winter Activity (February 2016)
- Technical Webinar #2 (March 2016)
- Legislative Luncheon Update (April 2016)
- Francis M. Keville Annual Dinner (April 2016)
- Bertram Berger Seminar (May 2016)
- BSCES Public Awareness & Outreach Awards Celebration/Herzog Dinner (May 2016)

The Kayaking on the Charles River trip was a great success as we had excellent weather and a larger than expected turnout. It was the first activity of this year that we were able to join together as committee members and host a fun event for friends and family. We are striving to plan another friends and family oriented activity as the year progresses. Please stay tuned as we will provide more event details throughout the year.

As we engage more members and place a high value on everyone's time, we continue to recognize the need for flexibility. Therefore our approach is:

- 1. Out of necessity, our event planning meeting times and dates are based on active participants' availability and will be set by each event chair after groups are formed and in the near future.
- 2. The T&DI Boston Chapter executive committee holds conference calls at monthly intervals to address chapter business and set meeting agendas.
- 3. We plan to host bi-monthly evening meetings open to all active T&DI Boston Chapter members. These meetings will be social in atmosphere.

In order to become successful in achieving our goals, we are looking to engage innovators, leaders, and motivated individuals in the transportation and development profession. It is through new ideas and an extensive knowledge base in engineering practices, social interactions, and event management that the T&DI Boston Chapter will contribute to enhancing the engineering community at large. This is your opportunity to stand out and show what you can do outside the day-to-day practices within your private company or public agency to advocate for and improve the development throughout the commonwealth. If you are a transportation or land development professional and an ASCE T&DI member looking for a group where you can discuss current happenings, exchange ideas, and strive to make a difference-you are invited to join the Boston Chapter of T&DI.

To learn more, contact me at tdi.bsces@gmail.com or visit our LinkedIn and Facebook pages. Be sure to review current news on events and meetings for the T&DI Boston Chapter sent to all members by our Secretary and Marketing Director, Jay Carroll.

Volunteer Opportunities

Outreach Volunteers Needed!

by Olivia A. Richards, Assistant Structural Engineer, Gill Engineering and BSCES Public Awareness & Outreach Committee Chair

Future City Mentors

Future City teams are signing up to compete in this year's Future City Competition (Saturday, January 21, 2017). We are looking for engineers to mentor the teams! Mentoring consists of advising the students on how to design a successful city. This year's theme is Public Spaces. Ideally, you will be able to work with the middle school students and provide engineering advice throughout the project. This may happen in person, via email, or even Skype. Typically, most engineers devote approximately 12-14 hours from September to January. Additionally, if you cannot mentor this year, we will need judges for the January 21st competition day as well. Please contact me at oliviaannerichards@gmail.com if you are interested. Volunteers are needed to support our teams from the following cities throughout Massachusetts and New England:

Boxford, MA	Provincetown, MA
Chelsea, MA	Salem, MA
East Longmeadow, MA	Somerville, MA
Hingham, MA	Westfield, MA
Lawrence, MA	Canaan, VT
New Bedford, MA	Fremont, NH

Model Bridge Mentors

Model Bridge teams will be registering for the BSCES Model Bridge Competition in September. We need engineers to mentor these teams! Mentoring consists of advising the students while they design a small scale bridge (40 inches in length) with the specified materials. The competition begins at the end of October. Ideally, the mentor will be able to work with the kids and provide advice throughout the project. This may happen in person, via email, or even Skype. Typically, most engineers visit the school weekly or every other week from November to January. Please contact me (oliviaannerichards@gmail.com)



BSCES Public Awareness & Outreach Committee members attended the 11th Annual West End Children's Festival in Boston. Pictured: Benjamin Mall and Olivia Richards from the committee.

if you are interested! The competition will be held on February 4, 2017.

Girl Scouts' Geek is Glam STEM Expo

Saturday, October 15, 2016, 9 AM – 5 PM. Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA

This exposition brings together various industries involved in science, technology, engineering and mathematics to showcase to the Girl Scouts of Western Massachusetts. BSCES will be involved in two different activities at the event. We will have a display and information booth at the open exposition and a workshop on bridge building for Girl Scouts. We need volunteers to assist with the bridge building workshop. Girl Scouts will be working in teams to build different types of bridges. Volunteers will assist with the activity and help to answer questions. In the afternoon, we need volunteers to help represent BSCES at the booth during the open expo. Volunteers will be talking to girls and parents about BSCES and the civil engineering industry.

For more information on this and other volunteer opportunities or becoming part of the BSCES Public Awareness & Outreach Committee, please contact Olivia Richards (oliviaannerichards@gmail.com).



Recent News and Updates

BSCES Welcomes New Board of Government

BSCES is pleased to announce the results of the 2016-2017 BSCES Board of Government Elections. Members of the 2016-2017 Board of Government have taken their oath of office and officially assumed oversight of BSCES with the commencement of the 2017 BSCES fiscal year on July 1, 2016. BSCES members will welcome their new leaders during the 168th BSCES Annual Awards Dinner, which takes place the evening of Monday, November 14, 2016 at the University of Massachusetts Club, located on the 32nd floor of One Beacon Street, Boston, MA. The members of the new BSCES Board are as follows:

President

Brian A. Morgan, Esg., CDM Smith President-Elect Malek A. Al-Khatib, PE, Louis Berger Secretary Charles W. Roberts, PE, Childs Engineering Treasurer Robert L. Leger, PE, Massachusetts Port Authority Assistant Treasurer Gregory L. Mirliss, PE, AECOM Senior Vice President Geoffrey B. Schwartz, PE, GZA GeoEnvironmental, Inc. Senior Vice President Richard D. Maher, PE, William Perry Associates Vice President Christopher "Topher" Smith, PE, Melrose, MA Vice President Bruce L. Jacobs, PhD, PE, EnviroInsite, LLC Past President Ellen P. White, PE, Patrick Engineering Western MA Branch Vice President Vacant Institute Chapter & Technical Group Chairs COPRI Boston Chapter Ryan M. McCoy, PE, Pare Corporation Construction Institute Boston Chapter Christopher P. Hersey, Skanska Engineering Management Group Michaela L. Bogosh, PE, CDM Smith

EWRI Boston Chapter Ronald K. Burns, PE, Arcadia Technology, Inc. Geo-Institute Boston Chapter Jennifer A. Jordan, PE, JCK Underground, Inc. Structural Engineering Institute Boston Chapter Dennis J. Baker, PE, HNTB Corporation T&DI Boston Chapter Bryan Zimolka, PE, Howard/Stein-Hudson Associates Younger Member Group Alyson Stuer, PE, C&C Consulting Engineers

BSCES Thanks 2016–2017 Society Sponsors

The BSCES Board of Government would like to thank the following firms for their support as 2016–2017 BSCES Society Sponsors:

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- Louis Berger · VHB

BSCES Thanks 2016–2017 Program Sponsors

The BSCES Board of Government would also like to thank the following firms for their support as 2016–2017 Program Sponsors:

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- Stantec
- TranSystems
- Tufts University
- Weston & Sampson Engineers, Inc.

BSCES Welcomes New Members

BSCES Board of Government is pleased to welcome the following new members who joined BSCES since the start of fiscal year 2017 which began on July 1, 2016: *Affiliate Members*

Robert A. Johnson, Paxton, MA Otoniel C. Ramos, Quincy, MA Thomas Suski, Unistress Corporation

Associate Members Emily C. Anderson, EIT, Green International Affiliates, Inc. Cory Cormier, EIT, Simpson Gumpertz & Heger, Inc. Michael Dube, EIT, Methuen, MA Connor Lauzon, CDM Smith Carlo Pavone, EIT, Malden, MA

Kathryn Roosa, EIT, Jamaica Plain, MA

Teren P. Wong, EIT, Howard Stein Hudson

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Ushakar Jha, PE, Rye Development Christina M. Papadopoulos, PE, Town of Chelmsford Charles M. Parsons, RLS,

Kelly, Granger, Parsons & Associates, Inc. Jonathan Smith, PE, Kennedy/Jenks Consultants

Student Members

Dean Avrahami, University of Massachusetts Amherst Alexander Bornholdt, Merrimack College Carli Gavin, University of New Hampshire Lauren O. Gonynor,

University of Massachusetts Amherst Arvand M. H. Navabi, Northeastern University George K. Rakib, University of Massachusetts Lowell

Autio Receives William H. Wisely American Civil Engineer Award

The BSCES Board of Government is pleased to congratulate former BSCES President Anni Autio, PE, Thompson & Lichtner Co., Inc., for recently being named the recipient of the William H. Wisely American Civil Engineer Award. This award recognizes members of ASCE who have shown a consistent commitment to promoting the history, heritage, and development of technical and professional activities of the Society. Anni was chosen by the ASCE Executive Committee to receive this award "for her guidance and leadership as a civil engineer in all phases of environmental projects, her dedication to preserve the history and heritage of ASCE and the profession, and her unselfish service to ASCE."

Hajjar Receives Moisseiff Award

The BSCES Board of Government would like to congratulate Professor Jerome F. Hajjar, PhD, PE, Northeastern University, for being named corecipient of the American Society of Civil Engineers' 2016 Moisseiff Award for his paper on "Quasi-Static Cyclic Behavior of Controlled Rocking Steel Frames." This paper, which was published in the November 2014 issue of the ASCE's Journal of Structural

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Recent News and Updates (continued from page 7)

Engineering, can be downloaded from the ASCE Library. Established by ASCE in April 1947, the Moisseff Award is a memorial in recognition of the accomplishments of Leon S. Moisseiff, a notable contributor to the science and art of structural design. This prize is given to an important paper published in a print issue of an ASCE journal, dealing with the broad field of structural design.

Send Us Your News

Looking to strengthen the community that is BSCES, the BSCES Executive Committee and Newsletter Editorial Board has decided to expand the content of this *BSCESNews* Recent News and Updates column by including more member news. Have you recently been recognized for a professional accomplishment, passed the Professional Engineer Exam, received a promotion, or changed employers? If so, send your news items to BSCES Newsletter Editorial Board Chair Michael R. Cunnigham, PE, Kleinfelder, at mcunningham@kleinfelder.com.

BSCES Recognized for Commitment to Diversity

BSCES was recently honored with the 2015 ASCE Section and Branches Diversity Award in recognition of its commitment to fostering diversity and inclusion within the civil engineering community. In selecting BSCES to receive this award, the ASCE Committee on Diversity and Inclusion (CDI) cited the formation of our Diversity and Inclusion Task Force, our diverse board membership and our contributions to the promoting STEM in underrepresented student populations, as stellar examples of the essential value of diversity and inclusion.

BSCES 2017 Model Bridge Competition

Join the Public Awareness & Outreach Committee for the Kickoff Meeting of the 2017 Model Bridge Competition! Each year a group of civil engineers come together to choose a material to be specified for bridge construction and write technical specifications for the bridge design. The goal of this competition is to design, construct and submit a structure with the specified materials and design for judging in the categories of most efficient and most aesthetic bridge design. We welcome all students in grades 12 and below to participate in the competition and practice their bridge building skills. The Kickoff Meeting will take place at BSA Space, 200 Congress Street, Suite 200, Boston, MA 02210 on Saturday, October 22, 2016. For more information, the latest updates, and initial registration, visit the BSCES website.

Free Online Career Fair

There are many benefits to ASCE and BSCES membership. One upcoming perk is an online career fair on Thursday, October 20, 2016. Participation in this virtual fair is free for members. All job seeker participants in the event will be part of a diverse pool of talented professionals. Additionally, your company can register to "interview" potential candidates. ASCE's Online Career Fair will connect your company with top talent from a vast community of professionals, representing all sectors around the country. The online format provides an easy, effective way to discover top talent. Employers will receive a fully customized booth, complete with logo, images, open positions, videos and other information important to candidates. During the live event, employers will receive three recruiter seats, where recruiters will connect directly with job seekers in one-on-one chats to discuss career opportunities and determine if the candidate could be a good match for any openings.

Launch a Civil Engineering Club at a Local High School This Fall

ASCE's Civil Engineering Clubs connect high school students with engineer mentors, who together explore civil engineering through activities, lessons, and field trips. It's easy to get a club started with ASCE's online and offline resources which range from downloadable activities to school supplies and marketing materials. For more information, visit the <u>Civil Engineering Club webpage</u> or contact ASCE's pre-college outreach staff via email at outreach@asce.org.

New Mini-Poster Outlines Path for Just-Starting Engineers in Pursuing Licensure

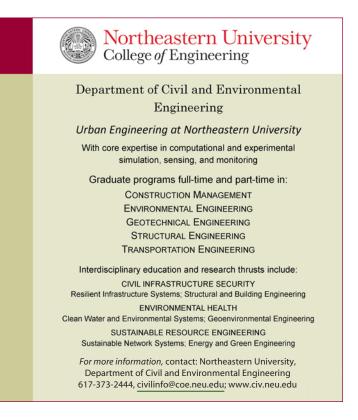
ASCE's Committee on Licensure has released a new "Engineers Guide to Pre-Licensure Experience," a mini-poster intended to help transitioning college graduates with experience guidelines in their first years of practice. This infographic highlights the various professional practice topics engineering interns should develop, based on ASCE's Civil Engineering Body of Knowledge. View and download the guide here.

Key Contacts Needed to Help ASCE Tell the Civil Engineering Story

If you have an interest in becoming an advocate for the importance of the civil engineering profession, consider becoming an ASCE Key Contact. If ever there was a time for Society members to become Key Contacts and engage in public policy conversations going on across the country, it's now. The next six to nine months offer a number of major opportunities for ASCE members to influence legislative decisions on infrastructure investment, as candidates at all levels of government ask for votes this fall. <u>Read</u> some encouragement from seven Key Contacts, who talk about why they find it rewarding here. For more information, or to register as an ASCE Key Contact, click here.

Update Your ASCE Profile

Have you moved lately, changed jobs, or do you have a new email address? It is very important that we receive your updated contact information. Please make sure you update your profile at ASCE National. Every month BSCES receives updated member information from ASCE that we utilize for all BSCES correspondence. You have a personal profile that you can access and update your contact information. Simply go to the ASCE "Membership & Communities" page and click on the "Log in..." bullet under the Already a Member section. Once you've logged in, you can edit your contact information. Members can also always call 800/548-2723 and have someone in Customer Service make updates for them over the phone.



Upcoming Events

For more information and to register for events, please visit www.bsces.org

To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your BSCES member login information, call 617/227-5551.

T&DI Boston Chapter Webinar

Wednesday, October 19, 2016

12:30 PM – 1:30 PM

Transportation Infrastructure Needed for Self Driving Cars

Dan Krechmer, Principal, and Marty Milkovits, Senior Associate, Cambridge Systematics

This webinar will provide an overview of the latest technology, policy, and key planning and design considerations for the transportation infrastructure needed for self-driving cars, including case studies of the impacts of connected and automated vehicle technology (C/AV) on transportation planning, ITS and operations.

Please see the Insert at the end of this month's newsletter for further details.

Engineering Management Group Seminar

Thursday, October 20, 2016

Northeastern University, Snell Library (Rm 90) 360 Huntington Avenue, Boston, MA 02115

5:30 PM Social/Registration and Refreshments 6:30 PM Presentation

The Flint Water Crisis: Keeping the Citizens of Flint Safe

Emily Garner, PhD Student, Virginia Tech

The Flint Water Crisis is one of the most significant public health issues that our country has faced in recent history. The uncovering of elevated levels of lead in the City of Flint Michigan's drinking water shook the city and the nation's confidence in their public water supply and led to regulatory action. Throughout the crisis, the citizens of Flint turned to Virginia Tech researchers to be their voice. Please join us to hear Ms. Garner speak on how the Flint Water Study team at Virginia Tech uncovered the water quality issues in Flint.

Please see the Insert at the end of this month's newsletter for further details.

Younger Member Group Information Session

Wednesday, October 26, 2016

Nitsch Engineering, 2 Center Plaza, Suite 430 Boston, MA 02108

5:30 PM Registration; 6:00 PM Presentation

NCEES Information Session with Paul Tyrell

Paul Tyrell, PE, Chief Civil Engineer, Senior Associate, STV Inc.; Vice Chair, Massachusetts State Licensing Board

Have you been wondering about the engineering and surveying exams? Do you have questions about engineering licensure? Join the BSCES Younger Member Group for an informative dinner session with Paul Tyrell, PE, NCEES Speaker and Vice Chair of the Massachusetts State Licensing Board.

Please see the Insert at the end of this month's newsletter for further details.

ASCE and BSCES Sponsored Seminar

Thursday – Friday, November 3 – 4, 2016 Hyatt Place Boston Braintree 50 Forbes Road, Braintree, MA 02184

8:30 AM – 4:30 PM

Law School for Civil Engineers

Nadine Nasser Donovan, Esq., Teacher/ Consultant, SEAK, Inc.; Partner, Mulvey, Ennis, Keefe, and Donovan, LLC.

The law affects every aspect of your professional and personal life. In order to succeed, you must have an advanced knowledge of the law and the American legal system. This seminar is designed for any civil engineer who would like a better understanding of the law or the legal system. It is ideal for any civil engineer who needs to work closely with statutes or regulations, is or may become involved in litigation, serves as an expert witness, and/or is considering pursuing a legal degree.

Click here to register for this event online.

168th BSCES Annual Awards Dinner

Monday, November 14, 2016

The University of Massachusetts Club One Beacon Street, Floor 32 Boston, MA 02108

5:30 PM Registration and Reception 6:30 PM Opening Remarks 7:00 PM Dinner

7:45 PM Keynote Address/Remaining Program

Keynote Speaker: Former Massachusetts Governor Michael S. Dukakis, Distinguished Professor of Political Science, Northeastern University

Please join us for the 168th Annual Awards Dinner at the University of Massachusetts Club for an evening celebrating BSCES and the engineering profession. BSCES will recognize new leaders, present annual awards, and honor our newest Honorary Members, Former Governor Michael S. Dukakis and Founding Principal of Nitsch Engineering, Judith Nitsch, PE.

Please see the Insert at the end of this month's newsletter for further details.

Program Committee Sponsored NHI Training

Tuesday – Friday, Nov. 29 – Dec. 2, 2016 Hilton Garden Inn Worcester 35 Major Taylor Boulevard, Worcester, MA *8:00 AM – 4:30 PM*

Fracture Critical Inspection Techniques for Steel Bridges

The course curriculum for this training reflects current practices, while addressing new and emerging technologies available to bridge inspectors. In addition, the course features exemplary training; hands-on workshops for popular types of nondestructive evaluation (NDE) equipment; and a case study of an inspection plan for a fracture critical bridge.

Please see the Insert at the end of this month's newsletter for further details.

continued on page 10

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Upcoming Events (continued from page 9)

Program Committee Sponsored NHI Training

Tuesday – Thursday, February 14–16, 2017 Hilton Garden Inn Worcester 35 Major Taylor Boulevard, Worcester, MA

8:00 AM – 4:30 PM

Bridge Inspection Refresher Training

The major goals of this course are to refresh the skills of practicing bridge inspectors in fundamental visual inspection techniques; review the background knowledge necessary to understand how bridges function; communicate issues of national significance relative to the nations' bridge infrastructures; re-establish proper condition and appraisal rating practices; and review the professional obligations of bridge inspectors. This course is based on the "Bridge Inspector's Reference Manual," 2002 (updated 2006), with reference to the AASHTO Manual as defined by the National Bridge Inspection Standards regulation.

Please see the Insert at the end of this month's newsletter for further details.

Mark Your Calendar!

Wednesday, November 9, 2016

Boston's Secret Bridge and More— Massport's Thomas J. Butler Freight Corridor Project

Wyndham Boston Beacon Hill Boston, MA

Featuring Sam Sleiman, PE, CCM

Director, Capital Programs & Environmental Affairs, Massachusetts Port Authority

Please see the Insert at the end of this month's newsletter for more information on this SEI Boston Chapter-sponsored event.

ASCE Webinars

ASCE WEBINARS

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ASCE | CONTINUING

Are you planning to take an ASCE webinar? Sign up with the code WEBBOSSEC and 20% of your registration fee will be donated to the Boston Society of Civil Engineers Section/ASCE.

For a full listing of ASCE Webinars, click here.

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Civil/Structural Engineers—Immediate opportunities at all levels for motivated professionals interested in helping to grow a progressive transportation engineering and design firm. Position requires BSCE, 3+ years of experience, as well as Microsoft Office and AutoCAD proficiency. Please forward your confidential resume to: Gill Engineering Associates, 63 Kendrick Street, Needham, MA 02494; or email Dayna Gill at dgill@gill-eng.com.

Become a BSCESNews Contributor

Would you like to contribute to the newsletter of the oldest civil engineering society in the country? The BSCES Newsletter Editorial Board is seeking members who are willing to write articles for publication in *BSCESNews* or to join the Editorial Board.

Typically 300 to 700 words, *BSCESNews* featured articles are about technical topics or professional matters of interest to civil engineers. The November 2016 issue of the newsletter for example, will highlight the ASCE Structural Engineering Institute Boston Chapter and feature one or more articles on the theme of Structures.

Editorial Board members meet monthly via conference call to plan upcoming issues of the newsletter. They also solicit, write and/or review newsletter articles.

For more information on how you can become a BSCESNews contributor, contact BSCES Newsletter Editorial Board Chair Mike Cunningham at mcunningham@kleinfelder.com or BSCES Association Manager Rich Keenan at rkeenan@engineers.org.





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Transportation Infrastructure Needed for Self Driving Cars

Marty Milkovits

Senior Associate Cambridge Systematics **Dan Krechmer** Principal Cambridge Systematics

Wednesday, October 19, 2016 12:30 PM – 1:30 PM

This webinar will provide an overview of the latest technology, policy, and key planning and design considerations for the transportation infrastructure needed for self-driving cars, including case studies of the impacts of connected and automated vehicle technology (C/AV) on transportation planning, ITS and operations.

Marty Milkovits has more than 15 years of experience with expertise in estimating, implementing, validating, calibrating travel demand models, and has been involved in the early efforts to represent Connected/Autonomous Vehicles in regional models through the California High-Speed Rail project.

Dan Krechmer has over 40 years of experience in transportation planning, and has specialized in Intelligent Transportation Systems for the past 23. His focus is on ITS planning and operations for state, regional and local agencies including recent experience in connected/automated vehicle technology.

Registration Deadline: Monday, October 17, 2016

\$70 Members, \$100 Non-Members Unlimited viewers per registered seat

Information/Registration:

Register for a seat to the webinar and pay by credit card online at <u>http://bit.ly/TDI-101916</u>. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your BSCES member login information call 617/227-5551. You can also register for this event by mail or email. To do so, download and complete a <u>BSCES Event Registration Form</u> and follow the submission instructions. Cancellations received after October 17, 2016 will be billed.

Two days prior to the webinar, a link for <u>www.gotowebinar.com</u> will be emailed to all registrants along with instructions to login for the event. Please feel free to email <u>tdi.bsces@gmail.com</u> if you have any questions.



This webinar provides 1.0 Professional Development Hours (PDH) Supported by the staff of The Engineering Center Education Trust





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The Flint Water Crisis: Keeping the Citizens of Flint Safe

Emily Garner, PhD Student, Virginia Tech

Thursday, October 20, 2016

Northeastern University, Snell Library (Room 90) 360 Huntington Ave, Boston, Ma 5:30 PM Social/Registration and Refreshments; 6:30 PM Presentation

The Flint Water Crisis is one of the most significant public health issues that our country has faced in recent history. The uncovering of elevated levels of lead in the City of Flint Michigan's drinking water shook the City and the Nation's confidence in their public water supply and led to regulatory action from water utilities and environmental agencies across the country. The monetary cost of rectifying this issue will undoubtedly be immense but the social cost of the exposure is yet to be fully realized. Throughout the crisis, the citizens of Flint turned to Virginia Tech researchers to be their voice as an unbiased outside party. They allowed the researchers into their homes so that the depth of the issue could be understood and actions could be taken to address the problem.

Please join us to hear Ms. Garner speak on how the Flint Water Study team at Virginia Tech uncovered the water quality issues in Flint. Emily Garner is currently a PhD student at Virginia Tech studying Environmental and Water Resources Engineering. She is a member of the Flint Water Study team led by Dr. Marc Edwards that worked with citizens of Flint, Michigan to identify unsafe levels of lead in their drinking water and advocate for a resolution. She will present about her team's journey to provide the citizens of Flint with scientific evidence to support their claims that their drinking water was unsafe for consumption.

Registration Deadline: Friday, October 14, 2016

\$50 Members, \$65 Non-Members, \$45 Public Sector Members \$50 Public Sector Non-Members, \$20 Students & Senior Members (65+) \$500 Table of 10

Information/Registration:

Appetizers and beverages will be provided prior to and after the presentation. Register to attend this meeting and pay by credit card online at <u>http://bit.ly/EMG-102016</u>. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your BSCES member login information call 617/227-5551. You can also register for this event by mail or email. To do so, download and complete a <u>BSCES</u> <u>Event Registration Form</u> and follow the submission instructions. Cancellations received after October 14, 2016 and no-shows will be billed.







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NCEES Information Session

Paul Tyrell, PE, PLS

Chief Civil Engineer & Senior Associate, STV, Inc. Vice Chair, Massachusetts State Licensing Board

Wednesday, October 26, 2016

Nitsch Engineering, 2 Center Plaza, Suite 430, Boston, MA 5:30 PM Registration; 6:00 PM Presentation

Have you been wondering about the engineering and surveying exams? Do you have questions about engineering licensure? Join the BSCES Younger Member Group for an informative dinner session with Paul Tyrell, PE, PLS, NCEES Speaker and Vice Chair of the Massachusetts State Licensing Board.

For more information, contact <u>BSCESYMG@gmail.com</u>.

Registration Deadline: Friday, October 21, 2016 \$5 Students \$10 Members

\$15 Non-Members

Information/Registration:

Register to attend this meeting and pay by credit card online at <u>http://bit.ly/2016NCEES</u>. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your BSCES member login information call 617/227-5551. You can also register for this event by mail or email. To do so, download and complete a <u>BSCES Event Registration Form</u> and follow the submission instructions. Cancellations received after October 21, 2016 and no-shows will be billed.







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Mark Your Calendar!

Boston's Secret Bridge and More – **Massport's Thomas J. Butler Freight Corridor Project**

Sam Sleiman, PE, CCM **Director, Capital Programs & Environmental Affairs,** Massachusetts Port Authority

Wednesday, November 9, 2016

Wyndham Hotel, 5 Blossom Street, Boston, MA 02114 6:00 PM Registration, Social and Pizza, 7:15 PM Presentation

The Massachusetts Port Authority (Massport) is undertaking a major expansion and modernization of its Paul W. Conley Terminal in South Boston, New England's premier container port facility. The first stage of the project – the Thomas Butler Dedicated Freight Corridor and Buffer Open Space, is now well into construction. It consists of improvements which will mitigate impacts of current and future operations on the abutting neighborhoods, provide tangible benefits to the larger community, and demonstrate Massport's commitment to being a good neighbor.

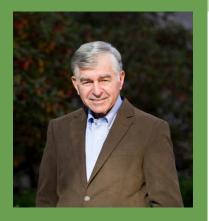
The major project elements include a new 2/3 mile roadway which will remove nearly 1,000 container truck trips per day from East First Street, and a nearly 4acre public open space which will buffer residences from the new roadway and expanded terminal. The buffer space will be heavily landscaped and includes a multi-use path, providing a new linear open space connection to existing parks along the Harbor. The project also includes a relative rarity within Boston city limits: A significant new over-water roadway crossing, on a new alignment.

Please join us to learn more about the bridge, the roadway, the park, and other elements of this exciting – yet somewhat "under the radar" project.





168th BSCES Annual Awards Dinner



Keynote Speaker: Former Massachusetts Governor Michael S. Dukakis Distinguished Professor of Political Science Northeastern University

November 14, 2016

The University of Massachusetts Club

One Beacon Street, Floor 32, Boston, MA 02108 5:30 PM Registration & Reception; 6:30 PM Opening Remarks; 7:00 PM Dinner; 7:45 PM Keynote Address & Remaining Program

When Michael S. Dukakis was elected Governor in 1974, he inherited a record deficit and record high unemployment and is generally credited with digging Massachusetts out of one of its worst financial and economic crises in history. After losing the 1978 gubernatorial election, Dukakis defeated Edward King, was elected Governor in 1982, and reelected to an unprecedented third four-year term in 1986 by one of the largest margins in history. In 1986, his colleagues in the National Governors' Association voted him the most effective governor in the nation. In 1988, he was the democratic nominee for the President of the United States.

Since June 1991, Dukakis has been a Distinguished Professor of Political Science at Northeastern University and Visiting Professor at the School of Public Policy at UCLA. His research has focused on national health care policy reform and the lessons that national policy makers can learn from state reform efforts. In 1998, Dukakis was nominated by President Clinton and served a five-year term as a member of the Board of Directors of Amtrak.

During his keynote address, Dukakis will discuss a North South Rail Link connecting Boston's North and South Stations and the importance of investing in public transportation.

Honor Award Winners and Newest Honorary Members:

Please join us for an evening celebrating BSCES and the engineering profession. BSCES will recognize new leaders, present annual awards, and honor our **newest Honorary Members, Former Governor Michael S. Dukakis and Founding Principal of Nitsch Engineering, Judith Nitsch, PE**. Space is limited for this event, register today!

168th BSCES Annual Awards Dinner:

You can use this form to register one or more attendees. Please fill in the number of people you wish to register for the appropriate price point and add up the total attendees and total amount. If registering multiple attendees, please forward their names and contact information to <u>bscesreg@engineers.org</u>.

Registration Fees:

Type BSCES Member: Non-Member: Table of 10: Fee

\$160.00

\$210.00 \$1.600.00

Totals:

Number of Attendees	Amount

Register Online: Register and pay by credit card online at: <u>http://bit.ly/168thBSCESAnnualAwards</u>. To receive the member price you must login using your BSCES assigned username and password. If you do not know your login information call 617/227-5551.

Register by Mail or Email: You may also register by mail or email. To do so, complete the registration form below and email to <u>bscesreg@engineers.org</u> or mail to: BSCES, The Engineering Center, One Walnut Street, Boston, MA 02108-3616.

Registrant Information:

Name (s):			
Organization:			
Address:			
Telephone:		Email:	
Credit Card: Please bill my (Check one):	Visa	MasterCard	American Express
Name On Credit Card:			
Credit Card Number:	Expiration Date:		
Billing Address:			
Signature:			

Check: When paying by check, please make checks payable to "BSCES" and mail with your completed Registration Form to the above address.

Registration Deadline: Friday, November 4, 2016

No-shows and cancellations received after Friday, November 4 will be billed. For questions please call 617/227-5551. No phone registrations.

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Fracture Critical Inspection Techniques for Steel Bridges Tuesday, November 29, 2016 – Friday, December 2, 2016

Hilton Garden Inn Worcester, 35 Major Taylor Boulevard, Worcester, MA Tuesday through Thursday, 8:00AM – 4:30PM Friday, 8:00 AM – 2:00 PM

This training examines current practices, while addressing new and emerging technologies available to bridge inspectors. In addition, the course features classroom training; hands-on workshops for popular types of nondestructive evaluation (NDE) equipment; and a case study.

The first day of the training focuses on the concept of fracture critical members (FCMs), FCM identification, failure mechanics, fatigue in metal, and an overview of NDE methods. Day two includes demonstration sessions and hands-on applications of NDE techniques for dye penetrant, magnetic particle testing, Eddy current testing, and ultrasonic testing. Days three and four emphasize inspection procedures and reporting for common FCMs, including problematic details, I-girders, floor beams, trusses, box girders, pin and hanger assemblies, arch ties, eyebars, and cross girders/pier caps. The course will conclude with a case study detailing the preparation of an inspection plan of a fracture critical bridge.

Please note: Prior to taking this course, participants should have completed NHI course 130055, Safety Inspection of In-Service Bridges, or possess equivalent field experience relative to bridges. Participants also should have a thorough understanding of bridge mechanics and bridge safety inspection procedures as required by the National Bridge Inspection Standards. Please visit the NHI website at <u>www.nhi.fhwa.dot.gov</u> or contact them at 703/235-0500 for additional information on the prerequisite course requirements.

Registration Deadline: Friday, October 28, 2016

Registration Fees: \$1,500 Members, \$1,800 Non-Members Registration fee includes course materials, continental breakfast, breaks, and lunch.

Information/Registration:

Attendance for this program is limited to 30 participants. Individuals who attempt to register after the course is closed will be added to a waiting list.

Reservations will be accepted on a first-come first-serve paid reservation basis. Payment must be received with registration to secure a slot. Register to attend this course and pay by credit card online at <u>http://bit.ly/NHI-112916</u>. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your login information call 617/227-5551. You can also register for this event by mail or email. To do so, download and complete a <u>BSCES Event Registration Form</u> and follow the submission instructions. Cancellations or no shows after October 28, 2016 will be billed.



This presentation provides 2.5 Continuing Education Units (CEU) Supported by the staff of The Engineering Center Education Trust



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Hilton Garden Inn Worcester, 35 Major Taylor Boulevard, Worcester, MA Tuesday through Thursday, 8:00AM – 4:30PM

The major goals of this course are to refresh the skills of practicing bridge inspectors in fundamental visual inspection techniques; review the background knowledge necessary to understand how bridges function; communicate issues of national significance relative to the nations' bridge infrastructures; re-establish proper condition and appraisal rating practices; and review the professional obligations of bridge inspectors. This course is based on the "Bridge Inspector's Reference Manual," 2002 (updated 2006), with reference to the AASHTO Manual as defined by the National Bridge Inspection Standards regulation.

Core course topics include inspector qualifications and duties, bridge mechanics, record keeping and documentation, fatigue and fracture in steel bridges, traffic safety features, safety, National Bridge Inventory (NBI) component ratings, superstructure type identification, inspection techniques and case studies for decks, superstructures, bearings, substructures, channels and culverts, and a mock bridge inspection classroom exercise. Optional topics include inspection of truss gusset plates, adjacent box beams, and post-tensioning tendons.

Registration Deadline: Monday, December 19, 2016

Registration Fees: \$1,400 Members, \$1,700 Members Registration fee includes course materials, continental breakfast, breaks, and lunch.

Information/Registration:

Attendance for this program is limited to 30 participants. Individuals who attempt to register after the course is closed will be added to a waiting list.

Reservations will be accepted on a first-come first-serve paid reservation basis. Payment must be received with registration to secure a slot. Register to attend this course and pay by credit card online at <u>http://bit.ly/NHIBridgeRefresher2017</u>. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your login information call 617/227-5551. You can also register for this event by mail or email. To do so, download and complete a <u>BSCES Event Registration Form</u> and follow the submission instructions. Cancellations or no shows after December 19, 2016 will be billed.



This presentation provides 1.8 Continuing Education Units (CEU) Supported by the staff of The Engineering Center Education Trust