The NEBRASKA Civil Engineer

Official Publication of the Nebraska Section of the American Society of Civil Engineers

EVENT CALENDAR:

April

16th - Transportation Group Meeting with the UNO Student Section - Biaggi's Ristorante - Omaha

May

14th - Annual Banquet Meeting

ISSUE HIGHTLIGHTS:

From The President

Civil Engineers and Public Policy - ASCE Policy Statements (Part 7)

Enginners Without Borders

Civil Engineers and Public Policy - Report Card for America's Infrastructure

Outreach Kits Available

"E" Week Truss Bustin' Competition

PRESENTING

April 2009

The Transportation Group Presents:

"Omaha-Council Bluffs Metro Beltway Feasibility Study"

Thursday, April 16th

Featuring: Matt Tondl, P.E. Senior Vice President - HDR Engineering

Matt Tondl is a Senior Vice President of HDR and currently in charge of the Omaha Engineering Department. He holds BS and MS degrees from the University of Nebraska. He specializes in the planning and design of transportation projects having completed many studies and designs throughout the Midwest. Mr. Tondl is the Project Manager of the Beltway Study.

| Location: | Biaggi's Ristorante Italiano 13655 California Street (Northeast of 144th and Dodge) Omaha | |
|-------------|---|----------------------------------|
| Times: | Social Hour Dinner Meeting and Presentation | 5:30 6:30 7:30 |
| Menu: | Family-Style Dinner: House Salad (Mixed greens, carrots, cucumbers and roasted red peppers tossed in herb-garlic balsamic dressing) Rigatoni Alla Bolognese (Rigatoni and sausage tossed with our hearty meat sauce, a touch of cream, and parmesan cheese) Chicken Marsala (Marinated chicken breast with sauteed mushrooms, carmelized onion and a marsala wine sauce, served with garlic mashed potatoes) | |
| Spousos and | quests are welcome meal prices | a selicted per person. All mosts |

Spouses and guests are welcome meal prices as listed per person. All meals are \$24. Student meals FREE. Price is \$10.00 without a meal. RSVP by 12 PM Monday, April 13th to **rsvp@neasce.org**. Subject Line: ASCE RSVP

Deadline for articles to be published in the April newsletter will be April 27th. Email articrles to Aaron Grote at editor@neasce.org

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From the President

Spring has sprung! It is officially spring now, and we would like to thank Lara Syrocki, our Environmental Technical Chair, for her efforts to plan the March Section meeting. We had a great turnout, despite the draw of staying home to watch March Madness. The speaker was great, and a lot of engineers are now curious about how to sign up for a pilot on in-home monitoring of their electricity usage!

The Section would also like to thank Mike McIntosh, one of our Directors, for attending the **Benson High School Career Fair** on March 12. In addition, several of our Lincoln members have expressed an interest in judging at the Nebraska Junior Academy of Science state science competition. We are pleased to be receiving invitations from many schools for outreach and career fair activities - we love to have the opportunity to share our love of engineering and encourage today's students to pursue engineering as a career. It also means our "Introduction to Engineering" outreach kits and displays are being used! Both of these were created last year through a State Public Affairs Grant given by ASCE. If you are interested in being more involved in outreach activities, please let me know. The Section would like to develop a list of potential volunteers to approach whenever

- Marie Maly, P.E.



Marie Maly, P.E. President of ASCE

we receive requests. If you simply need an engineering activity to help your favorite scout troop earn a badge, we can help with that, too. Check out the Outreach link on the front page of our website to find flyers about your options.

At our Section Board meeting in March, the following items were on our agenda:

- Endorsement of Loras Klostermann, P.E., M.ASCE for Region 7 Governor
- Professional Surveyors
 Association of Nebraska Gary
 Tinkham presented on an effort to
 obtain new elevation benchmarks
 throughout the state
- Brass Level Sponsorship of the 139th Annual Conference in Kansas City (mark your calendar for October 29-31, 2009 – ASCE's Annual event will likely never be closer to Nebraska)

(Continued Page 3)

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 Approval of amendments to the Section's Rules of Policy and Procedure (see our website for the updated document)

Our April Section meeting will be held on Thursday the 16th and followed by the Transportation Conference on Friday the 17th. We hope to see you there!

Civil Engineers and Public Policy - Report Card for America's Infrastructure

Check out www.asce.org/reportcard for the full Report Card for America's Infrastructure. Though the grades were released in January, the final report on the state of our Aviation, Bridges, Dams, Drinking Water, Energy, Hazardous Waste, Inland Waterways, Levees, Public Parks and Recreation, Rail, Roads, Schools, Solid Waste, Transit, and Wastewater was not released until March 25.

Ticha Perez (Transportation Technical Chair) and Bill Arneson (Legislative Affairs Co-Chair) attended the release as part of their attendance at ASCE's Leadership Training in Government Relations (the "Fly-In"). Ask them about their experience next time you see them!

Consider contacting your legislator to alert them of the Report Card... and if you feel inspired and want to help create a Report Card for Nebraska's Infrastructure, contact Scott Gilliland (structural@ neasce.org).

New Resources from ASCE

If you worry about the economy: ASCE has created a new page to help our members survive and thrive in challenging economic times. It includes links for resources, professional development, awards, and some of ASCE's many benefits. Check it out here: http://content.asce.org/SurviveandThrive.html.

For future engineers: Visit ASCEville – our new destination for inspiring future engineers (specifically grades 4-7) – http://content.asce.org/asceville/index. html. The website includes a lot of helpful resources, including a great new handout: What is a Civil Engineer?

To find out what the VIPs think: ASCE has launched a new monthly podcast featuring leading figures in Civil Engineering and their honest, straightforward views... "Insights" can be found at www.asce.org/ insights (listen now or download to your MP3 player).

If you need advice or have some to give: If you would like to mentor a new engineer or find a mentor of your own, visit www.asce.org/mentoring to learn more about ASCE's new online mentoring program.

"E" Week Truss Bustin' Competition

Contributed by John Hill, Truss Bustin' Competition Coordinator

The 21th Annual "Truss Bustin' Competition during Engineers' Week was conducted at the Qwest Center on Saturday, February 21, 2009. This happened to be the largest competition in terms of entries that we have had yet. It marked another huge success for local Omaha area high school students. We really had high visibility at the Qwest Center and I would like to thank the Omaha Home and Garden Expo for allowing the use of the Qwest without charge.

Altogether 212 trusses were entered in the competition from Gross Catholic, Burke, North and Millard West. The testing started at 1:00 PM and finished nearly 4¹/₂ hours later. The top three places for the 21th Annual 2008 event went to:

1st Place - Caleb Peterson, Omaha North: \$150.00 and certificate (Caleb also was 4th place) 2nd Place – A 3 person team of Dolinski Lewis Waller, Gross Catholic: shared \$75.00 and certificate 3rd Place – A 3 person team of O'halloran Wiley Benson, Gross Catholic: shared \$50.00 and certificates

The students are given rules to follow that in general allowed freedom for their own creativity yet allowed some control so the truss all fit in the testing device. The testing device has a load cell and digital screen that locks in on the maximum load in pounds at failure of the truss. The load carried (in Lbs.) is divided by the weight of the truss in grams to the 1.25 power. The intent of the 1.25 power is to stress to the students the importance of putting material where is helps for strength and providing an economical truss. The truss holding the most weight topped last year's winner by 47 Lbs. at a total load of 629.6 Lbs. The truss device can apply up to three concentrated loads six inches apart across a 24-inch span. This year the loading condition randomly selected was two concentrated loads, at the outside positions, the first time in five years that we had a symmetrical load condition. A device braces the truss laterally at the third concentrated load point, but no load is applied vertically.

The load-to-weight ratio of the winning truss was 5.13 (up from 4.12 and 2.61 the previous two years). The winning truss from Omaha north weighed 30.7 grams (1.08 ounces) and carried a total load at failure of 360.6 pounds. This truss weighed less than last year's winner and held more than 10 Lbs. more.

Marie Maly, P.E, President NE ASCE and John Hill, P.E., Truss Bustin' Competition Coordinator, will be going to the schools to make presentations to the students and talk to the classes. present participated in presenting the prizes and framed certificates to the students at their High Schools.

A special thanks to all the Nebraska Section members and others that helped to contact the metro area high schools and assisted during the truss testing, the UNO Student Chapter of ASCE, that helped with the weighing and testing recording and sorting, and Dr. Massoum Moussavi UNO Student Chapter Faculty Advisor, to helping get the students organized. Thanks to the Civil Engineering Round Table for the prime location at the QWEST Center and those High Schools that participated.



Some of the 212 Trusses waiting to be tested.

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Civil Engineers and Public Policy – ASCE Policy Statements (Part 7)

A policy statement is a broad overview of policy on a topic of continuing concern to the civil engineering profession. ASCE has 166 policy statements and resolutions on a variety of topics. For more information and the full text of ASCE's policy statements, see: https://www.asce.org/pressroom/news/policy.cfm.

Education

PS 465: Academic Prerequisites for Licensure and Professional Practice PS 140: Civil Engineering Education PS 463: History and Heritage PS 377: Mathematics and Science Education

Solid Waste

PS 523: Interstate Transport of Solid Waste Management PS 516: Municipal Solid Waste Management

Transportation

- PS 445: Aviation Transportation Program
- PS 208: Bridge Safety
- PS 402: High-Speed Ground Transportation
- PS 367: Highway Safety
- PS 436: Incorporating Bicycle Facilities into Transportation Planning and Design
- PS 496: Innovative Financing for Transportation Projects
- PS 454: Intelligent Transportation Systems
- PS 276: Integrated Truck and Highway Design
- PS 149: Intermodal Transportation Systems
- PS 495: Operation and Maintenance of Transportation Systems
- PS 494: Public Transportation
- PS 521: Rail Infrastructure Investment
- PS 504: Rehabilitation of Historic Bridges
- PS 497: Surface Transportation Research Funding
- PS 382: Transportation Funding
- PS 343: Transportation Trust Funds

Also, be sure to check out the Surface Transportation Authorization Policy. It is not a Policy Statement, but will be very important as Congress will be debating the Surface Transportation authorization later this year. http://www.asce.org/files/pdf/pressroom/Authorization %20of%20Surface%20Transportation%20Program-Final. pdf

Save the Date - 139th Annual ASCE Conference

What professional activities have you scheduled for October of this year? The Kansas City Section will be hosting the 139th Annual ASCE Conference this year on October 29 – 31, 2009. Please mark your calendars to attend. If you've considered attending an Annual Conference in the past, but were concerned about the time and cost for travel, this will be your opportunity.

For more information, see http://content.asce. org/conferences/annual2009/index.html

March Meeting Hosted by the Environmental Group

Thanks to Lara Syrocki for planning the March Meeting. The list below can be considered official documentation of attendances at the March meeting worth 1 PDH credit.

Mike Reif Amelia Toellner Ed Prost Jeff Kopocis Jim Connoy Lara Syrocki termann Steve Kathol Daren Konda Bob Laplce Lisa Richardson Steve Bottum Ernie Parra Christen Bywater David Stuhr Patricia Perez Janis Pfingsten Ed Thiele Dan Jackman John Stansbury Loras Klos-

Doug Collins Marie Maly John Hill Wally Stern David Svingen Scott Gilliland Dave Insinger Brian Havens

Engineers Without Borders

Engineers Without Borders-USA (EWB-USA) is a national, non-profit organization whose mission is to partner with developing communities to improve their quality of life through the implementation of environmentally and economically sustainable engineering projects, while developing globally responsible engineers. EWB-USA is at the forefront of a movement that sees engineers as having the skills and expertise to address the most significant issues affecting world health and poverty, including water purification and delivery, sanitation, and sustainable energy systems.

The University of Nebraska at Omaha and Lincoln recently formed a joint EWB student chapter. Currently, they are working on developing a project to improve the quality of life for the people of Kianjavato, Madagascar, and are working in cooperation with the Henry Doorly Zoo's ongoing conservation efforts.

Professional members can work on student projects as mentors, conduct project design reviews, train students or other professional members, or work on their own projects. You do not even have to be an engineer to participate. Skills such as project planning, construction, fund raising, coordination, and public health are essential to the success of EWB projects.

We are excited to announce a Chapter is forming in the Omaha area. The Omaha EWB Professional Chapter formation and activities in the spring and summer of 2009 will entail officer elections at an April 8th meeting (5:30pm at Terracon's Omaha office), chapter organization, mentoring support for the UNO/ UNL student chapter, and planning for fund raising / project initiation in the fall of 2009.

If you would like to get involved in EWB or learn more, please look for future meeting announcements of contact Sara Hanson at sara.hanson@tetratech.com. For more information about EWB-USA, go to www. ewb-usa.org.

Thanks to an affiliation agreement, ASCE members who join (or renew membership in) EWB-USA through the ASCE website receive a significant discount on their yearly dues – \$60 instead of \$100! See www.asce. org/ewb for details, and check www.neasce.org for meeting announcements.



Become a Key Contact

Are you interested in knowing what the 111th Congress is up to? Join the Key Contacts Program -ASCE's grassroots advocacy program. You will receive email about public policy issues important to our profession and learn how to interact with our elected leaders. See www.asce.org/keycontacts for more information and to sign up.

Engineering 101: Outreach Kits Available

Outreach kits are available for your use. See www. neasce.org for more information (including flyers for engineers and teachers/ troop leaders) and email outreach@neasce.org if you can volunteer your time to a teacher requesting a kit or would like to check one out for a group of youngsters you already know.

Learn more and join!

Any ASCE member can join the Key Contact Program. Visit http://www.asce.org/keycontacts.

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The Nebraska Civil Engineer

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Mike Naccarato, Fundraising Chair, at (402)738-6160 or fundraising@neasce.org