

# ASCE Newsletter

## Central Ohio Section

November, 2013  
Volume 18, Issue 4

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### DECEMBER LUNCHEON

**DATE:** Thurs. Dec. 19, 2013 - 11:30 AM Registration, 12:00 P.M. Lunch & Presentation

**LOCATION:** Crowne  
Plaza North, 6500  
Doubletree Ave,  
Columbus, OH 43229

**TOPIC:** Temporary  
Pre-Engineered  
Structures Featuring  
the Railroad Bridge  
over Alkire Road in  
Southwest Franklin  
County



This presentation will touch upon the process of erecting pre-engineered bridges. Among several other national and international projects, the temporary railroad bridge over Alkire Road in southwest Columbus at Harrisburg Pike (US 62-SR3) will be featured. The 1902 railroad stone arch bridge over Alkire Road was replaced due to increased traffic, narrowness, and vertical and horizontal clearance issues. The bridge replacement construction had to be performed with limited railroad track use outages during so called "Railroad Holidays" or slow scheduled train movement time periods. Any outages beyond these "Railroad Holidays" resulted in fees to the project for the added mileage for train detours. With limited work space to build the new structure, the temporary pre-engineered railroad bridge considerably reduced the inconvenience to railroad and Alkire Road vehicle traffic and avoided any fees due to track outages.

**SPEAKER:** Jeff Simkins, Midwest Regional Manager, Acrow USA

**MENU:** Bruschetta Chicken, Papardelle Pasta, or a Vegetarian. Please specify at time of registration..

**CPD:** A certificate for one (1) Continuing Professional Development (CPD) hour will be issued.

**COST:** \$20 ASCE Members & Guests, \$15 ASCE Life Members, \$10 Students.

**REGISTER:** Registration is due by 5:00 PM on Mon., Dec. 16. Late registrations and walk-ins may not be accepted. Registration fees may apply for no-shows and registrants canceling after the deadline. To register contact Mark Seidemann: 614-844-4015, or [register@centralohioasce.com](mailto:register@centralohioasce.com)

**PAYMENT:** The preferred method of payment is online (click [HERE](#)) before the registration deadline. Payment on the day of the event is available by cash or check payable to Central Ohio ASCE.

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## LETTER FROM THE PRESIDENT

Central Ohio Section Members:

First & foremost: Happy Holidays to all! Take some time off, if you can. Enjoy your families, friends (and your fellow engineers and colleagues). And, please stay warm this December!

I hope that you have registered for our December 19<sup>th</sup> ASCE luncheon. It will be about Temporary Pre-Engineered Structures Featuring the Railroad Bridge over Alkire Road in Southwest Franklin County. This presentation will touch upon the process of erecting pre-engineered bridges. Read details in this newsletter, and hope to see a great turnout!

As before, we are providing our members with quality free webinars that will be held at places where we can attract as many ASCE member participants. One upcoming webinar for Central Ohio Section Members will be on 12<sup>th</sup> of December. It is on Design of Anchor Bolts. It will be at E. L. Robinson Engineering, 1801 Watermark Drive, Suite 310, Columbus, OH 43215. Check details in this newsletter.

Also, do not miss 2014 STEM Exp on December 22<sup>nd</sup> at the Metro School, 1929 Kenny Road, Columbus, OH 43210. This will be organized by the ASCE Central Ohio Section Younger Member Group; the STEM Expo is an educational outreach event that will feature hands-on, interactive activities for students grades K-8 sponsored by local companies in the Science, Technology, Engineering and Math fields. The event will also feature special exhibits from the Ohio State University. Activities will include Spaghetti Bridge – sponsored by HR Gray and many more.

Feel free to provide us input on webinar subjects that our selection committee can take into consideration. We will ensure that topics will be greatly useful ones and will earn you PDH's.

Regards,

Michael Navabi, PE, D.WRE, BCEE, F. ASCE

President – ASCE Central Ohio Section

[President@CentralOhioASCE.com](mailto:President@CentralOhioASCE.com)

## OHIO CONSTRUCTION CONFERENCE

What: Ohio Construction Conference

When: March 13, 2014

Where: The Ohio Union - 1739 North High St.

Save the date for the 2014 Ohio Construction Conference, presented by McGraw Hill Construction and The Builders Exchange of



Central Ohio. The conference will bring together a unique mix of industry leaders in the commercial construction community - representing owners and facility managers, architects and engineers, contractors and subcontractors, and industry suppliers in a constructive, collaborative conference aimed to benefit each component of a project team.

For additional information, click [HERE](#).

## MEMBERSHIP RENEWAL RACE

The race is on to renew your ASCE National and Central Ohio Section Membership now. If you renew by December 13, 2013, the Central Ohio Section could be the lucky winner of a \$1,000 cash prize to

**2014 ASCE SECTION RENEWAL**

# The Race Is On.

**Fast Track Our Section to Win \$1,000!**

The three Sections with the highest percentage of renewed members by December 13, 2013, will win a cash prize of \$1,000!

Get into the Renewal Race today, pay your National and Section dues, and keep our Section on pace to win \$1,000. Your renewal supports valuable local programs and is always appreciated!

support our local programs. Prizes will be awarded based on the highest percentage of renewing members in three categories - Large, Medium, and Small sections. To renew now, please click [HERE](#). Thank you in advance for your support and your continued membership.



## 2014 STEM EXPO



**What:** 2014 STEM Expo

**When:** Saturday, February 22, 2014

9:00 AM - 1:00 PM

**Where:** The Metro School (Ohio State campus)

The ASCE Central Ohio Section Younger Member Group is hosting a STEM Expo at the Metro School on the Ohio State Campus on Saturday, February 22, 2014 to conclude Engineer's Week. The Younger Member Group



is seeking local STEM companies to sponsor hands-on, STEM related activities for the event. The goal is to expose K-8 students to the world of Science, Technology,

Engineering, and Math through fun and interactive activities.

Rather than seek monetary sponsorship, we invite local STEM professionals to organize an activity on behalf of their employer. Sponsoring an activity is an easy and great way to get involved in this educational and outreach event. Activity sponsor responsibilities would include:

- Developing a fun, interactive STEM related activity
- Obtaining funding through your employer for the activity materials, if necessary
- Facilitating the activity at the STEM Expo event (typically 2-3 people are needed)

Information for the event, including a list of sponsors and the planned activities can be found at <http://www.centralohioasce.com/STEM-Expo>

We have reached out to the local STEM community through distribution of a dozen Professional Society local chapters and hope to have a diverse selection of activities. Please help us make this a great community event. Event T-Shirts will be available for activity sponsors for a cost of \$12 per shirt.

Contact [STEMexpo@centralohioasce.com](mailto:STEMexpo@centralohioasce.com) to RSVP, sponsor an activity, order T-Shirts, or submit questions.

We thank you for your support!



## PE REFRESHER COURSE

**What:** 2014 Civil Engineering PE Refresher

**When:** Jan. 21 - Feb.13, 2013

Tuesday/Thursday Nights

7:30 PM - 10:30 PM

**Where:** OSU Campus, 426 Hitchcock Hall

**Cost:** \$600. Full refund (less \$50 processing charge) for any cancellation/withdrawal prior to the first class meeting date. No refunds for partial attendance. Checks or money orders payable to The Ohio State University.

**Registration:** Minimum of two weeks in advance. If enrollment does not meet the minimum required, the course will be cancelled and all money will be refunded.

**Parking:** There is a fee for parking in the OSU garages. A map can be found on OSU's webpage at <http://www.osu.edu/map/>.

**Textbooks and Notes:** No text is specified for this course; participants are encouraged to refer to the

textbooks that they used in their formal education. Copies of lecture notes will be provided. Participants will be given a copy of the *PE Civil Sample Questions and Solutions* book from the National Council of Engineering Examiners (NCEE).

**Topics Covered:**

- Structural Analysis
- Reinforced Concrete and Structural Steel Design
- Transportation Engineering
- Environmental Engineering
- Geotechnical Engineering (tentative)
- Construction Management
- Engineering Economics
- Hydraulics & Hydrology

**Contact Information:**

Ed McCaul  
College of Engineering  
Phone: 614-292-7931  
[mccaul.1@osu.edu](mailto:mccaul.1@osu.edu)





## CIVIL ENGINEERING ACHIEVEMENT AWARD

### Ohio Outstanding Civil Engineering Achievement Award Criteria

The award is given annually to a Civil Engineering project, not an individual or firm, to recognize the contribution of the many engineers who have worked on the project.

Selection is based on how the project demonstrates the application of civil engineering skills and its contribution to civil engineering progress and mankind. Judges will consider the following criteria: (1) contribution to the well-being of people and communities, (2) resourcefulness in planning and in the solution of design problems, (3) pioneering use of materials and methods, (4) innovations in construction, (5) impact on the physical environment, unusual aspects, and esthetic values, and (6) the project's potential adverse effects. The nomination should look frankly at the project's potential problems.

A bronze plaque will be awarded to the winning Ohio Project to be mounted in a prominent location at the project site. The presentation ceremony will provide an excellent opportunity for publicity and recognition.

### Guidelines for Eligibility

Only projects meeting the following requirements in the calendar year of the award are eligible:

1. Bridges, tunnels, waterway structures, roads (other than toll roads) are eligible only when carrying traffic. The time of dedication or final completion is not important.
2. Toll or similar regional roads may be entered for the year's award when it is 75 percent complete. Any portion in use may be eligible on its own merit.
3. Water supply, flood control, and power dams are eligible when ready to take the full design head of water. For power dams, it is not important when power goes on line.

4. Power plants, including nuclear, are eligible when power goes on line.
5. Buildings and structures are eligible when ready for use.
6. Airports and similar large developments are eligible when a structure or feature is operational. However, such structures or features must stand on their own merit in the competition with no consideration given for the overall project. The entire project may be considered for the year's award when it is 75 percent operational in its initial stage.
7. Any portion of a water supply and waste control project may be eligible in its year of completion, but that portion will be considered on its own merits, not as representing the overall project. Where only additional units, similar to those already functional, remain to be completed, the entire project may be considered for the year's award when it is 50 percent operational in its initial stage.
8. Military projects are eligible for their civil engineering aspects.
9. The judges will determine eligibility for projects that do not fall within any of the above categories. Ohio Council will give the judges as much latitude as possible in determining eligibility and making their final selection.
10. No project or component part thereof is reconsidered after receiving an award.

### Submittals

Entries should be submitted to the Ohio OCEA Chair, Al Esser, no later than 5:00 PM, Friday, February 28, 2014. An entry form and additional information can be found at <http://ohioasce.org/OCEA>.

If you have any questions concerning your project's eligibility or how to submit your nomination, please call Al Esser at 440-256-6500, or send e-mail to [esser@sme-usa.com](mailto:esser@sme-usa.com).

## CALL FOR CAD INSTRUCTION VOLUNTEERS

Beginning in January, the ASCE Younger



Member Group will be presenting instructional Autodesk Civil3D Computer Aided Design (CAD) seminars on the campus of the Ohio State University. The seminars will introduce the students to drafting software and provide an introductory level of instruction to familiarize students with the skills necessary of a typical entry-level engineering position. While we're planning initially on bi-weekly sessions, any assistance from the Central Ohio Section to help supplement our teaching group would allow us to add more lessons for the students. This is also a great way to see prospective interns in action learning valuable job skills. Please contact Matt Baxendell ([Matt.Baxendell@woolpert.com](mailto:Matt.Baxendell@woolpert.com)) if you're interested in taking part.



## FREE WEBINAR - DESIGN OF CONCRETE EMBEDMENTS

What: Free Continuing Education Webinar - 1.5 PDH

When: Tuesday, Dec. 17, 2013

Time: 11:30 AM - 1:00 PM

Bring your own lunch

Where: E.L. Robinson Engineering, Inc.  
1801 Watermark Drive, Suite 310  
Columbus, OH 43215

Topic: Design of Concrete Embedments

RSVP: To [newsletter@centralohioasce.org](mailto:newsletter@centralohioasce.org) by Monday, December 9, 2013.

Open only to Central Ohio Section Members.

Seating is limited to the first 25 people.



Design of concrete embedments often baffles engineers because the building codes are generally silent on the issue. While the design of anchor bolts receives the attention of the International Building Code (IBC) and the American Concrete Institute's ACI 318 Appendix D, many other concrete embedments do not. However, the design capacities of anchor bolts as determined by following the latest provisions of IBC and ACI 318 Appendix D, are frequently very modest. In many cases they are insufficient to meet the load demands in practical applications, particularly in metal building systems (MBS). For decades the frame anchorage in MBS relied almost exclusively on anchor bolts. But today a major change is coming, where concrete embedments are used instead of, or in addition to, the traditional anchor bolts. The purpose of the webinar is to provide guidance on the design of concrete embedments in metal building systems, structural-steel buildings, and other structures.

The presentation covers the design of shear lugs, embedded column bases, and other embedments, including a new concrete embedment developed by the instructor. Following the procedures of various authoritative publications, the instructor explains the nuts-and-

bolts of the design process and guides the participants through step-by-step design examples for various concrete embedments.

### Webinar Outline

- Introduction: The Purpose of concrete embedments
- Relevant provisions of authoritative publications
- Design for shear
  - ☐ Shear lugs
  - ☐ A newly developed anchor
  - ☐ Embedded column base
  - ☐ Other concrete embedments
- Design for tension
  - ☐ Anchor bolts
- Conclusion

### Learning Outcomes/Benefits

- Learn why the design capacities of anchor bolts are often insufficient to meet the load demands in practical applications and why concrete embedments are used instead
- Become familiar with the advantages and disadvantages of various concrete embedments and the methods of design
- Explore the available concrete embedment systems
- Find out which nonmetal construction material is critical to the successful performance of concrete embedments
- Discover the practical methods of analysis used in the design of concrete embedments for tension and shear
- Learn why and how some common practices in the anchorage of metal building system frame columns are likely to change in the future
- Work through step-by-step design examples for concrete embedments

## SHALE ENERGY ENGINEERING CONFERENCE

What: Shale Energy Engineering Conference

When: July 21-23, 2014. Registration opens February, 2014.

Where: Pittsburgh, Pennsylvania

ASCE's Shale Energy Engineering Conference will highlight the engineering issues related to shale oil and gas production, provide a platform to review the current status of regulatory

requirements in this area, and identify and promote the most cost effective and environmentally sound ideas, innovative solutions, and emerging technologies related to water resources management, geological and geotechnical aspects of shale gas development, and broader infrastructure components of the shale oil and gas exploitation cycle.

Click [HERE](#) for more information.



# 2013-2014 CENTRAL OHIO ASCE MEETINGS

Meeting Date	Topic	Group(s)	Location	Coordinator
Thursday December 19, 2013 Lunch	Alkire Road Temporary Railroad Bridge	ASCE	TBD	Mike Bashore
Thursday January 16, 2014 Dinner	Zoo Safari	ASCE	Bridgewater Conference Center	Mike Mazzoli Kevin Carpenter
Thursday February 20, 2014 Lunch	Engineers' Week	All	Bridgewater Conference Center	Engineering Week Committee
Sunday March 2, 2014 Lunch	Ohio Utilities Protection Service	ASCE	TBD	Mark Seidelmann
March 2014 Lunch	ASCE Central Ohio Section Annual Spring Seminar - Oil and Gas Water Resources	ASCE	TBD	AJ Smith
Thursday April 17, 2014 Lunch	ASCE National President- Elect Robert Stevens	ASCE	OSU	Bob Redfield/ Carolyn Merry
Thursday May 15, 2013 Lunch	Columbus Biofilters / Annual Awards Lunch	ASCE	TBD	Greg Barden
T.B.D. June 2014 Dinner	2014-2015 Planning Meeting	ASCE	Tommy's Pizza, Dublin, Ohio	ASCE
Friday June 13, 2014 Lunch/Dinner	Annual Golf Outing	ASCE	Darby Creek Golf Club	Jim Pajk (ASCE)

## KEEP UP TO DATE

### Join Our E-Mail List!

Stay up to date with current news -  
go to <http://centralohioasce.com/e-mail>.

Web: [www.centralohioasce.com](http://www.centralohioasce.com)

E-Mail: [asce@centralohioasce.com](mailto:asce@centralohioasce.com)

## BOARD MEETING

### Our Next Board Meeting

Will Be 11:30 AM  
December 12, 2013  
Location: Prime AE  
3000 Corporate Exchange Dr.  
Columbus OH 43231



## EMPLOYMENT OPPORTUNITIES

As a service to our members and colleagues who may be seeking employment opportunities, we have provided links directly to *Human Resources* or *Careers* pages on the company website below. Please click any of the company logos to visit the site. We thank the companies below for their support of the Central Ohio Section of ASCE.

The ASCE National website also provides employment assistance with hundreds of job

postings and additional resources. Please click the image to the right to visit the webpage.



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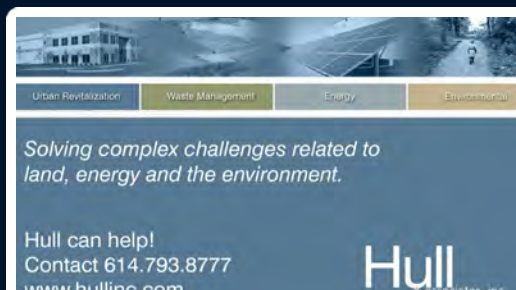


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