

ASCE Newsletter

Central Ohio Section

November, 2013
Volume 18, Issue 3

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NOVEMBER LUNCHEON

DATE: Thurs. Nov. 14, 2013 - 11:30 AM
Registration, 12:00 P.M. Lunch & Presentation

LOCATION: Sheraton Columbus Hotel at Capitol
Square, 75 East State Street, Columbus, OH

TOPIC: Columbus Commons
A Joint Meeting with SEAoO

Columbus Commons is a six story 325,000 SF mixed use development project adjacent to the public green space in downtown Columbus. The building consists of a Podium of Type IA construction with retail and townhomes at the ground floor level and a residential tower of Type IIIB construction above. The sixty-two foot tall building is framed predominantly with wood and is clad with brick veneer. The project also includes a connector tunnel to the existing parking garage that is located two levels or thirty feet below grade. The discussion will include an overview of the challenges on the project with specific consideration to fire rating, brick relief, wood shear walls, and wood shrinkage. In addition learn how the owner avoided potential pitfalls and developed a plan to provide a cost effective foundation system that helped mitigate risk for cost overruns associated with the foundations.

Onsite Tour: In addition to the presentation an on-site tour will be provided. If you are planning on attending, no participants will be allowed to attend unless proper PPE used. **All individuals on tour will need to provide their own safety glasses, hardhats, and reflective vests.**

SPEAKERS: Patrick Carney, P.E., LEED AP BD+C, Partner, Korda
Paul Hundley, P.E., Regional Geotechnical Engineer, PSI

MENU: House Salad, Herb Roasted Chicken, Chef's Choice of Starch and Vegetable, Bread and Double Chocolate Cake. Freshly Brewed Starbucks Coffee, Decaf, Tazo Hot Tea, Iced Tea and Water.

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., Nov. 11. 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

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.

PARKING: Sheraton Columbus has valet parking and the Columbus Commons has an underground parking structure that is connected to the Sheraton Hotel. Also street parking is available.

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LETTER FROM THE PRESIDENT

Central Ohio Section Members:

Our October meeting was about OSU North Residential Complex. It was a great presentation!

Our November 14th luncheon will be about Columbus Commons, a six story 325,000 SF mixed use development adjacent to the public green space in downtown Columbus. The presentation will provide an overview of the challenges on the project with specific consideration to fire rating, brick relief, wood shear walls, and wood shrinkage. In addition, you may learn how the owner avoided potential pitfalls and developed a plan to provide a cost effective foundation system that helped mitigate risk for cost overruns associated with the foundations. Check the registration page for details. We are expected to have a great turnout.

Saturday November 16th at Buffalo Wild Wings (on Lane & High Street), the OSU chapter of ASCE will join with the Younger Members Section of Central Ohio ASCE to host a game watch party for the undefeated Buckeyes' trip to Champaign, IL. All members are welcome to join. The cost will be \$10 per member, along with \$5 per guest for any guests. This covers food and non-alcoholic

drinks. Please contact Matt Baxendell (Matt.Baxendell@woolpert.com) to RSVP.

On December 19th, we will have a luncheon and presentation on Alkire Road Temporary Railroad Bridge. We have more activities in 2014 including luncheons / dinners.

As always, we will provide our members with quality, free webinars that will be held at places where we can attract as many ASCE member participants. Feel free to provide us input on webinar subject material that our selection committee can take into consideration. We will ensure that subjects will be useful and will earn you PDH's.

Regards,

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

President – ASCE Central Ohio Section

President@CentralOhioASCE.com

YOUNGER MEMBERS OSU GAMEWATCH

What: OSU Gamewatch Party

When: November 16, 2013

Where: Buffalo Wild Wings
2151 North High St.
(at Lane Avenue)

Cost: Free for Younger Members
\$10 - Section Members
\$5 - Member Guests & family members
Includes food and beverages*

RSVP: Matt Baxendell Matt.Baxendell@woolpert.com

Join the Younger Member (YM) Group event on Saturday, November 16th at Buffalo Wild Wings on the corner of Lane & High Street for the Ohio State-Illinois football game. This is an AWAY



game for the Buckeyes, so we'll be joined by the OSU Student section for the game. This was a fun event last year, as the attendance was around 30 people.

The event is open to the entire Central Ohio Section Membership, who will be charged \$10 per member and \$5 for guests and family members. Food and non-alcoholic beverages (*) will be provided.

This should be a fun event for everyone and we hope to see you all there! Feel free to bring your friends, co-workers (especially ones who would make a nice addition to the YM group) and families as well.

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.

2014 ASCE PRESIDENT INAUGURATION

2014 ASCE President Randy Over delivered his inauguration at the October 11 ASCE Annual Business Meeting held at the Society's 143rd Annual Civil Engineering Conference, in Charlotte, North Carolina. Over is a 1983 graduate of Ohio State University with a bachelor's degree in civil engineering and a Cleveland Section Member.



Over's focus will be on the what, the who, and the how of ASCE and civil engineering.

"I ask that you each reach into your heart and recommit to serving our profession," said Over in his inaugural speech. "Help us influence our profession, ASCE, and the world.... In your quest for a successful life, please recommit to the joy of service to our profession, our members, and our communities."

The what: [The Vision for Civil Engineering in 2025](#) was developed by ASCE in 2006 with the participation of some 60 civil engineering leaders and nonengineers from the United States and around the world. It was followed in 2008 with *Achieving the Vision for Civil Engineering in 2025: A Roadmap for the Profession*. Vision 2025 has been embraced by ASCE and by many civil engineering organizations around the world as an aspirational set of goals that will help civil engineers become "entrusted by society to create a sustainable world and enhance the global quality of life."

The who: The who is the ASCE membership and leadership who must prepare our profession for the future by inspiring the leadership of tomorrow. That means going beyond that initial pull in our hearts and actively taking a role in attracting, developing, and retaining the next generation of ASCE leadership.

The how: It starts with the current leadership walking the walk and leading the way.

To accomplish these goals, Over said ASCE needs to focus on 4 tactics:

- Communicate leadership opportunities and paths for service throughout the Society.
- Enhance and expand ASCE organizational leadership training to grow our future leadership and help them grow in their own careers.
- Foster programs that attract and retain life members as mentors to future leaders and encourage them to continue their contributions as ASCE leaders.
- Support and grow programs that engage our membership in the global practice of civil engineering and grow a future- and globally focused leadership.

Over noted that the ASCE membership is at a critical juncture with the Baby Boomers heading into retirement. It is up to the next generation to take over the leadership roles, and the current generation to develop those leaders, in order to continue to grow the profession and the ASCE organization.

CALL FOR CAD INSTRUCTION VOLUNTEERS

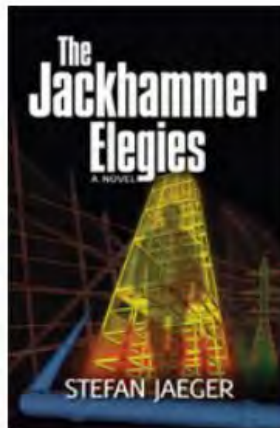
Beginning in January, the ASCE Younger Member Group will be presenting instructional



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) if you're interested in taking part.

THE JACKHAMMER ELEGIES

When Scott Carter, a savvy civil and structural engineer and ASCE member, finds himself in an elevator at the top of one of his own high-rise building designs, a powerful blast in the basement rocks Carter from his every-day life into a media limelight and ultimately into the crosshairs of a technically cunning terrorist. Carter's knowledge of the building's structural framework helps him alert the city about potential collapse, but that turns him into the conduit of threats from the mastermind of the attack, alias Jackhammer. Carter becomes a consultant to the FBI as it investigates the engineering angles to the case, teaming up with Special Agent Michelle Taylor, whose striking presence pulls Carter into the complications of a growing love. The partners ultimately find themselves matching wits with an elusive



mastermind hell-bent on bringing down the lifelines of a city's public works.

Praised for its character development and writing style, *The Jackhammer Elegies* offers readers of all backgrounds a sense of engineering-profession realism and human drama that makes this page turner come alive.

The novel recently won a 2013 SET Award from the Entertainment Industries Council. The EIC honors film, television and other genres that inspire "interest in Science, Engineering, Technology and Math through media and entertainment." Additional 2013 winners include the TV shows and movies *The Big Bang Theory*, *NCIS*, *Iron Man 3*, and *Star Trek into Darkness*, among others (see *EIC's SET Awards press release*).

For additional information, reviews, and purchasing opportunities, visit <http://www.thejackhammerelegies.com/>.

3-DAY SEMINAR - EARTH RETAINING STRUCTURES

What: 3-Day Seminar - 20 PDH

When: Dec. 3, 2013 - Full Day

Dec. 4, 2013 - Full Day

Dec. 5, 2013 - A.M. Only



Where: E.L. Robinson Engineering, Inc.

1801 Watermark Drive

Columbus, OH 43215

Topic: **Earth Retaining Structures**

RSVP: At E.L. Robinson website, click [HERE](#)

COST: \$650 if registered by November 15, 2013

\$700 by November 29, 2013.

Includes handouts, materials, breakfast and lunch on all 3 days.

E.L. Robinson is presenting a three day seminar on Earth Retaining Structures in Columbus, Ohio, on December 3-5, 2013. The seminar will be presented by Mr. Jerry DiMaggio and Dr. Jamal Nusairat. The goal of this course is to provide agencies with state-of-the-practice design tools and construction techniques to expand implementation of safe and cost effective earth retention technologies. This course addresses the selection, design, construction, and performance of earth retaining structures used for support of fills and excavations or cut slopes. Instructors cover factors that affect wall selection, including con-

tracting approaches with an emphasis on required bidding documents for each approach. Class discussions will include design procedures and case histories, demonstrating the selection, design, and performance of various earth retaining structures. Detailed information on subsurface investigation, soil and rock property design parameter selection, lateral earth pressures for wall system design, and load and resistance factor design (LRFD) for retaining walls are provided.

Outcomes:

- Describe potential applications for Earth Retaining Structures (ERS)
- Select a technically appropriate and cost-effective ERS
- Select appropriate material properties, soil design parameters, and earth pressure diagrams
- Perform design analysis and prepare conceptual designs
- Review contractor submitted documents
- Discuss contracting methods
- Describe construction and inspection activities for ERS

FREE WEBINAR - DESIGN OF ANCHOR BOLTS

What: Free Continuing Education Webinar - 2.0 PDH

When: Thursday, Dec. 12, 2013
11:30 AM - 1:30 PM

Bring your own lunch

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

Topic: Design of Anchor Bolts

RSVP: To newsletter@centralohioasce.org by Monday, December 9, 2013.



justify, in some cases other types of embedments must be used instead. This will lead to a major change in common practices in this area of construction. This webinar explores the complexities of the new design methodologies and explains how they affect the traditional practices of designing and placing anchor bolts. A number of alternative embedments are debated. The design examples illustrate the discussion. This webinar is co-sponsored by ASCE's Structural Engineering Institute and ASCE Continuing Education.

Webinar Outline

- Typical construction
- Anchor bolts in metal building systems
- Relevant provisions of the International Building Code
- ACI 318 Appendix D
- - Resisting tension loads
- - Resisting shear
- - Combined loading
- Comprehensive design example
- Are anchor bolts obsolete? Alternatives to anchor bolts

Learning Outcomes/Benefits

- Learn why the decades-old practices for designing anchor bolts are no longer appropriate and why new design solutions are needed
- Become familiar with contemporary methods of designing anchor bolts and embedments for shear and tension
- Explore the complexities of today's code provisions dealing with anchor bolt design, including those of IBC and ACI 318 Appendix D
- Find out which long-used practices for frame anchorage in pre-engineered metal buildings may need to be changed
- Discover the available options for meeting today's code provisions in structures where the column reactions include high horizontal and vertical uplift forces
- Work through a number of design examples illustrating practical solutions for today's code requirements

*Open only to Central Ohio Section Members.

*Seating is limited to the first 25 people.

Design of anchor bolts used to be rather straightforward. The building codes contained simple design formulas, and the procedures were easy to follow. To a limited degree, the latest editions of the International Building Code (IBC) continues the tradition by including a table of the allowable service load capacities for embedded bolts and a simple interaction formula for combined shear and tension. However, those capacities are very limited, and they are based on relatively large edge distances and spacing of the anchors.

For strength design, IBC references Appendix D of ACI 318, which contains a rather complex design methodology, and IBC further modifies some of its provisions. Since the introduction of Appendix D in 2002, its design approach changed drastically in every subsequent edition, attesting to the rapidly evolving state of our knowledge of the matter. Many challenges have been reported in trying to use Appendix D to design anchor bolts in practical applications.

The difficulties of meeting the new code provisions are particularly acute in metal building systems (MBS). In these ubiquitous structures the frame columns often exert significant lateral reactions on the foundations, yet the typical anchor bolt spacing and edge distances are rather small. For decades, the frame anchorage in MBS relied largely on anchor bolts designed to resist both shear and tension. Since ACI 318 Appendix D often makes this practice difficult to

2013 - 2014 CENTRAL OHIO ASCE MEETINGS

Meeting Date	Topic	Group(s)	Location	Coordinator
Thursday November 14, 2013 Lunch	Columbus Commons	ASCE	Downtown Columbus	Mike Mazzoli
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	Oil and Gas/Fracking	ASCE	TBD	AJ Smith
March 2014 Lunch	ASCE Central Ohio Section Annual Spring Seminar	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 20, 2014 Lunch/Dinner	Annual Golf Outing	ASCE	Darby Creek Golf Club	Jim Pajk (ASCE)

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Web: www.centralohioasce.com
E-Mail: asce@centralohioasce.com

BOARD MEETING

*Our Next Board Meeting
 Will Be 11:30 AM
 November 21, 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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