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Columbus Engineer

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PRESIDENT'S MESSAGE

By Paul F. Junk, PE, PS, FCC President



Welcome to another issue of Columbus Engineer. The Chapter has projects, which can use your help. Students at The Ohio State University need an OSPE Student Chapter. There are many good technical societies at OSU, but where will the young engineer get a good grounding of ethics and an understanding the working of the law. . How will a student recognize the need to be licensed professional and the responsibility to protect the public and the client? This is not an easy task. The other student organizations compete for the student's time so we need to provide something worthwhile. To start a student chapter we need a faculty sponsor and volunteers to supply programs and speakers for student meetings we need your help.

Membership – the Chapter is always on the lookout for a few good people. New engineers are entering the profession all the time. Your guidance of these people will help the quality of engineers in the future. If you have a candidate feel free to contact our membership co-chairs – Ron Eifert, PE, roneifert@aol.com or Ben Brown, PE, benbrown@cmtengr.com.

These are just a few of the projects we would like to work on, so help if you can. We will keep you informed on future undertakings.

The detailed summary of the outstanding October program is in this issue and can be found on page 5. I am looking forward to seeing you at our November luncheon, for details see page 2.

NOMINATIONS BEING ACCEPTED FOR FIVE AWARDS

Nominations are being accepted for the following five OSPE awards. To be considered for this year's awards, you must contact your Awards Chairperson no later than December 15th as the majority of these awards have application forms that must first be completed and the nomination will need to be approved by the FCC-OSPE Board during a regular Board meeting.

OSPE Citation – This is the highest honor that OSPE bestows upon an engineer. This award is presented annually to an Ohio Engineer with distinguished leadership in the engineering profession and in appreciation of selfless devotion to the highest ideals of service to society and to fellow man; and for sustained contributions to the technical and professional aspects of the engineering professions.

Meritorious Service Award – This award is presented on the basis of service to OSPE at both, the Chapter and the state levels and for outstanding contributions to the goals and objectives of OSPE. The award recipient shall be an active member in his/her Chapter and the emphasis is placed on continuous meritorious service over a long period of time.

Outstanding Engineering Student Award – This award is presented to an engineering student from an ABET

accredited Ohio engineering school based on scholastic achievement, participation in professional, technical, and other activities.

Outstanding Engineering Educator Award – This award is presented to a member of the engineering faculty of an ABET-accredited engineering program in an Ohio school and the educator shall have at least 5 years of experience subsequent to graduation from an accredited Engineering school and must be teaching an engineering course during the current term.

Outstanding Engineering Achievement Award – This award is presented in recognition for outstanding engineering accomplishments in manufacturing, construction or design, or combinations thereof. The nominated projects must have been completed during the calendar year preceding the award presentation and the nominated projects may be located outside the chapter geographical area.

Consider nominating your company, a colleague or even yourself for one of these awards. Don't Delay! Contact one of the members of your local Franklin County Chapter Awards committee, Ron Eifert, P.E., roneifert@aol.com or James Baltzer, jamesucee@yahoo.com.

OSPE-FCC November Luncheon Program

Date: Thursday November 19, 2015

Place: La Scala Restaurant
4199 W. Dublin Granville Rd., Dublin, OH

Time: Registration: 11:30 am
Lunch: 11:50 am
Speaker: 12:00 pm
Closing Remarks: 1:00 pm

Cost: Members: \$20.00 & Non-Members: \$30.00.

Registration: Visit fccospe.com. Pay at door or online at (www.fccospe.org). No access to computer contact Jim Arnold, 614-299-2133, to help with registration.

TOPIC: I-270/US 33 Interchange - The reconstruction of the I-270/US 33 interchange was identified as an intermediate project in the I-270/US 33 Northwest Freeway Study (NFS), completed by the Mid-Ohio Regional Planning Commission (MORPC) and the Ohio Department of Transportation (ODOT) in 2006. Eight conceptual alternatives were developed and studied to improve traffic operations, promote economic growth and eliminate hazardous crash areas while minimizing environmental and right-of-way impacts. The interchange improvements will be constructed in phases, with Phase 1 construction under way and Phase 2 construction approximately 15 years after completion of Phase 1.

Project highlights include:

- Accelerated design schedule – Selection of preferred alternative to final tracings in 14 months
- First project to use the Highway Safety Manual's Freeway and Interchange crash prediction methodologies to evaluate safety performance
- Phased construction approach
- Widening US 33 from two lanes to four lanes in each direction for approximately two miles
- Realignment and reconstruction of seven ramps
- Eight new bridges and three widened bridges
- Eight new retaining walls
- Aesthetic enhancements

Presenter: Andy Wolpert - Andy Wolpert is a senior technologist in CH2M'S Columbus office. Andy received his BCSE from Ohio Northern University and his MSCE from The Ohio State University. Andy recently served as a roadway segment lead on the \$200M I-71/I-670 Design Build in Columbus and currently serves as PM for the I-270/US 33 Interchange project.

Andy is a lifelong Cleveland sports fan... his one wish before he dies is to witness a professional sports team from Cleveland win a championship!

Presenter: Drew Griesdom - Drew Griesdom graduated from the Ohio State University in 2005 with a Bachelor of Science degree in civil engineering. Following graduation, he was hired as an EIT with the Ohio Department of Transportation and spent his first six years with the Department at Central Office in the Office of Maintenance Administration. In the Spring of 2012, he joined the District 6 Construction Department as the Design-Build Coordinator on the 71/670 Columbus Crossroads project and currently is the project engineer on the 270/33 InterCHANGE project in Dublin.

A certificate for 1 hour of Professional Development for attending the program will be presented at the luncheon.



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FCC Auxiliary Nov. & Dec. Meeting

The Auxiliary to the Franklin County Chapter of OSPE is having their annual philanthropic luncheon at La Scala Restaurant, 4199 W. Dublin-Granville Rd., Dublin, on Tuesday, November 17. The day will begin at 11:00 a.m. with a bake sale and small treasures table. A delicious meal of Italian foods will be served family style at noon. After lunch there will be a raffle of wrapped mystery packages brought by members. Marlene March will give the invocation and lead the pledge of allegiance. Hostess is Sharon Eifert. Funds raised by this event go to support engineering scholarships at OSU. Prospective members are urged to attend this worthwhile event.

The December 8th meeting will be at Scioto Country Club, 2196 Riverside Dr.(note change to 2nd Tuesday). Agnes Benedict will give the invocation and lead pledge of allegiance. Nancy Roehrs is to be hostess. Charter members and past presidents will be honored.

Entertainment will be a return performance by the Grandview Singers under Director of Choral Music for the Grandview High School. Andrew Krega. These young people put on a delightful program.

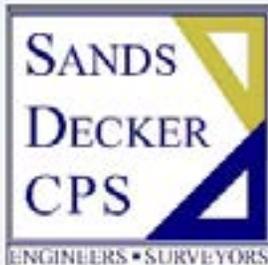
Guests are welcome at either of these luncheons. Make a reservation by calling Jean Mitchell at 262-7071. The auxiliary is not meeting in January or February. Our next meeting will be in March, 2016.

Central District Science Day 2016 March 19th – Volunteers Needed

The Franklin County Chapter will once again be a Sponsored Award Organization for the Central District Science Day. District Science Days are administered and held at 16 colleges and universities throughout Ohio. This is a golden opportunity to see our future engineers developing at a very early age.

The Central District Science Day will be held at Columbus State Community College on March 19th. Projects devoted to any engineering disciplines are eligible for the Chapter awards. Grading is based on the knowledge achieved, effective use of the scientific method or engineering design process, clarity of expression, originality and creativity. Awards of \$150, \$100 and \$50 will be presented to our top three finishers.

Judges are needed for the event, so if you are interested please email C.R. Weaver (crweaver@columbus.gov). Judges are asked to report to Columbus State Community College at 8:30 AM for a brief orientation and assignment of projects to judge. Judging concludes at approximately 11:30 AM so the time commitment is short. Any student that receives a superior rating from the “regular judges” will advance to the State competition.

LOGAN COLUMBUS ZANESVILLE



PEI (Professional Engineers in Industry)

What is **YOUR** Practice Division doing this year? Professional Engineers in Industry (PEI) is focusing on four charges:

- Develop community forums to engage PEs in industry and to generate relevant content for PE magazine and newsletters.
- Promote engineering careers and licensure to student members and young engineers by administering the \$2,500 PEI Scholarship for ungraduated engineering students.
- Complete the revision and promote the use of the newly revised “Guidelines to Employment for PE’s” as a resource to PE professionals and employers of Professional Engineers.
- Develop topics on ethical issues that are of interest and use to PEs in Industry

Develop community forums to engage PEs in industry and to generate relevant content for PE magazine and newsletters: This new charge is aimed at utilizing social media and existing NSPE media (such as, the PE magazine) to provide our membership with relevant information related to engineers in industry. Relevant information includes technology breakthroughs, new product introduction, employment trends, ethic cases of interest to PEs in industry, professional development, etc. Look for more information to follow on this charge!

Promote engineering careers and licensure to student members and young engineers by administering the \$2,500 PEI Scholarship for ungraduated engineering students: The PEI scholarship is currently given annually, in the Spring, to an engineering student of an ABET-accredited engineering school. Applicants must be sponsored by an NSPE member. Students must have already completed a minimum of two semesters or three quarters of an undergraduate engineering program or be enrolled in a graduate program. Both of which must be an ABET-accredited program. The 2015 PEI scholarship recipient was Rajia Abdelaziz who is currently a Senior at the University of Massachusetts with a double major in Electrical Engineering and Computer Science. (Reference:<http://www.nspe.org/resources/students/scholarships/professional-engineers-industry-scholarship> .) Chapters need to support this effort by identifying potential candidates for this annual PEI scholarship.

Complete the revision and promote the use of the newly revised “Guidelines to Employment for PE’s” as a resource to PE professionals and employers of Professional Engineers: This PEI charge was started a year ago and a draft

of the document has been reviewed by representatives from all Practice Divisions. This document is currently being edited to the final format. [The fourth edition published on June 10, 2006 is available at: <http://www.nspe.org/resources/interest-groups/industry/industry-publications>.) The purpose of these guidelines are for use by:

- Employers in evaluating their own practices regarding professional engineering employees
- Professional engineering employees in evaluating their own responsibilities and those of their employers, and
- New graduates and other prospective professional engineering employees in evaluating prospective employers.

These guidelines are considered as the minimum standards and are only guidelines that reflect the combined experience and judgement of many employers and professional employees. The fourth edition reflects changes in the engineering employment environment brought on by globalization. The fifth edition will highlight additional benefits that PEs contribute to industry and reflect the current working environment for engineers.

Develop topics on ethical issues that are of interest and use to PEs in Industry: The webinars that are currently available through the NSPE Seminar series were developed based on cases from Private Practice. PEI is working on developing topics that will address ethical issues that are applicable to industry. This PEI charge was started last year as the PEI Vice Chairs have created a subset of ethics cases that have been identified as containing issues that are of interest to engineers in industry. These chosen ethics cases are being modified to stress the issues that are more relevant to the engineers that work in industry.

If you have any questions about PEI or any of these 2015-2016 charges identified above, please contact the NSPE Central Region Vice-Chair, Tina Sutermeister, P.E., F.NSPE at tlsuterm@embarqmail.com.



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The Burning Bridge Project-October Program

Again our 2015-2016 October luncheon program was outstanding. Mr. Ferzan Ahmed, Deputy Director of District 6, Ohio Department of Transportation spoke very illustratively on the replacement of the I-70 bridge over I-270, which was damaged due to the fire from an ethanol transport truck. The project to replace the bridge, was contracted, tore down, rebuilt in less than a month. As engineers, we were extremely interested in the management of the extremely urgent project.

The ethanol fire was extinguished but the ODOT inspectors were not allowed on the site, until all was sufficiently cooled, as the ethanol could reignite. The contract was let as Type B, Pre-priced, with incentives on completion time. Quick setting concrete was used. Not all rebar was coated, as the bridge will be replaced within two years, to increase the clearance over I-270 to 16.5 feet. Damage pavement under the bridge was replaced just before the traffic was restored to normal.

Some interesting facts:

- Less than two days after the fire, a crossover was completed to allow traffic flow for I-70, albeit somewhat restricted.
- Within that time, the project was contracted to Shelly and Sands. Four companies had submitted bids.

- The contractor was given 30 days to complete the project.
- The contractor pulled equipment and supplies from other projects that they had in progress. The primary contractor utilized three subcontractors to finish the job.
- The contractors worked around the clock.
- The project was completed in 21 days after the fire and was reopened to traffic.

A more engineering detail description of the project will be in the December Issue of CE.

The picture below shows the section that had been removed and was ready for the rebuild.



Our sincere thanks to Ferzan Ahmed, for an outstanding presentation.

Engineer for a Day 2016

The “Engineer for a Day” program is organized for high school students who have an interest in learning about careers in engineering. The program takes place during the National Engineers Week this year being February 21-27, 2016. The students get to spend a day as a guest of an engineering company to gain first-hand knowledge of the role of an engineer.

This gives the students (high school juniors and seniors) a real world exposure to a possible future career as an engineer. The activities for the day of the program are to help the student learn – what do engineers do, what are the engineering activities of the company (engineering business and products), what field of engineering discipline is involved, and what are the challenges the engineer faces on a daily basis.

The Chapter is seeking industries, consultants and government agencies to host students for a day. This usually runs from 8:00 or 9:00 AM until 3:30 PM. Your organization would provide a program for the student/students during the day and their lunch.

If your organization is interested in hosting a student/students, please contact the program chair Charles Ohrstedt at 614-937-1512 or email mohrstedt@sbcglobal.net or Nancy Mergel, Administrator of the chapter office of the FCCOSPE at FCCOSPE@aol.com.

The program has enjoyed tremendous support from many companies and organizations. These companies have been very supportive of the program in the past and we appreciate and value their continued support at molding the future engineer. The program has changed over the years, as we now prefer that students have a means of transportation to and from their host companies.

If any members of OSPE-FCC know of any high school students that would like to participate in this educational program and have not received any information from their high school, please contact us so we can get them the information they will need to participate. We have always been able to place the students that have asked to participate in Engineer for a Day.

Some Little (Humorous) Facts about Thanksgiving That Every Engineer Should Know

1. The pilgrim celebration at Plymouth Colony, Massachusetts in 1621, is traditionally viewed as the initial American Thanksgiving. However, there are at least 12 other claims to where the “first” Thanksgiving was held: Texas, Florida, Maine, Virginia, and a few in Massachusetts. (You’re a little late Pilgrims! John Wayne.)

2. The earliest Thanksgiving in this continent actually happened in 1541, when Francisco Vasquez de Coronado and his expedition held a Thanksgiving celebration in Palo Duro Canyon within the present Texas panhandle. (Apparently he had an engineer/surveyor to tell him where he was.)

3. The Pilgrim’s Thanksgiving feast in 1621 occurred sometime between September 21 and November 1. It lasted three days and included 50 surviving pilgrims and approximately 90 Wampanoag Indians, including Chief Massasoit. (Apparently no engineers were present.)

4. President Lincoln declared the last Thursday in November as a national day of thanksgiving, and in 1941 Congress established the fourth Thursday in November as the national holiday. Not all states were eager to adopt Thanksgiving because some thought the nation’s government was exercising an excessive amount of power in declaring a national holiday. (Just like to day.) (Additionally, our southern engineers were hesitant to observe that which was largely considered a Union holiday.)

5. For us old professional engineers, when President Franklin D. Roosevelt proclaimed Thanksgiving as the next-to-last Thursday in November to prolong the Christmas shopping season, many Republicans rebelled. The holiday was temporarily celebrated on different dates: November 30 became the “Republican Thanksgiving” and November 23 was “Franksgiving” or “Democrat Thanksgiving.” (I know a few engineers that were very upset.)

6. Thanksgiving could happen as early as November 22 or as late as November 28. (No comment!)

7. The typical average distance travel for Thanksgiving trips is 214 miles, compared to 275 miles for the Christmas and New Year’s holidays. (Civil engineers take note of the very busy highways. Mechanical engineers take

note we need better efficiency in the powering of auto engines.)

8. Americans eat over 500 million pounds of turkey on Thanksgiving and lots of cranberries. The original natives used the cranberries to dye clothes. Only male turkeys gobble and are classified as gobblers. (Now what are male engineers classified.)

9. In 2007, George W. Bush granted a pardon to two turkeys named May and Flower. (They were not engineers.)

10. Thanksgiving football games began with Yale versus Princeton in 1876. (Two preeminent engineering schools in their time.)

11. Established in 1924, the Macy’s Thanksgiving Day Parade ties for second oldest Thanksgiving parade. Greater than 44 million people watch the parade in the media each year and 3 million attend personally. (The engineers are busy clearing the way for the high floats and especially that of Snoopy.)

12. The Friday after Thanksgiving is known as Black Friday largely because stores hope the busy shopping day will move them out of the red and into the black, i.e. positive profits. (Unfortunately, our engineering firms do not have that advantage.)

And now, the Columbus Engineer wishes all our members a very happy Thanksgiving Day.

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FIRST CLASS

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2015-16 CALENDAR

Nov. 10	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Nov. 15	5:00 p.m.	Deadline for December Columbus Engineer
Nov. 19	11:30a.m.	Program: Dublin US-33 over I-270 Bridge - Andy Wolpert, Ch2M Hill
Dec. 8	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Dec. 17	5:00 p.m.	Deadline for January Columbus Engineer
Jan. 12	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Jan. 15	5:00 p.m.	Deadline for February Columbus Engineer
Jan. 21	11:30a.m.	Program: Ethics - Bill Lhota
Feb. 9	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Feb. 15	5:00 p.m.	Deadline for March Columbus Engineer
Feb. ??	8:00 a.m.	Local Mathcounts Competition @ Columbus State Community College
Feb. 21-27		National Engineers Week (see www.eweek.org)
Feb. ??	8:00 – 3:00 p.m.	Engineer for a Day Program
Feb. ??	11:30 a.m.	Program: E-Week Luncheon