

THE NEBRASKA CIVIL ENGINEER



NEWSLETTER OF THE NEBRASKA SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

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1999-2000
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Meeting Information

DATE:

Thursday, February 17, 2000

HOSTS:

Geotechnical Group
Nebraska Section ASCE

TOPIC:

"The Rion Bridge, Greece"

SPEAKER:

Dr. Ralph B. Peck, P.E., Ph.D.

Professor of Foundation
Engineering, Emeritus
University of Illinois, Urbana

TIMES:

5:30-6:30.....Social Hour
6:30-7:30.....Dinner
7:30-End....Meeting and Program

LOCATION:

Anthony's Restaurant
7220 F Street
Omaha, Nebraska

MENU:

Club Steak.....\$20.00
Lasagna.....\$17.00
Chicken Parmesan...\$18.00

(Includes Tax and Tip, all checks
payable to Anthony's Restaurant)

Dinner and Meeting Reservations

RSVP By Noon, Fri. February 11
(See Page 3 For Details)



Dr. Ralph Peck

We are honored to have Dr. Peck speak at our February ASCE Section meeting. His topic will be "The Rion Bridge, Greece", a five-span cable-stayed structure with suspended spans totaling 7500 feet across the western end of the Gulf of Corinth. The site is in an earthquake-prone country with piers in 200 feet of water above at least 350 feet of soft sediments. The design-build team is French, the checker Canadian, and the financing International.

Ralph B. Peck was born in Winnipeg, Canada, in 1912. He grew up in Denver, where his father was Engineer of Structures for the Denver and Rio Grande Western Railroad. Intending to become a structural engineer, he received degrees of Civil Engineer and Doctor of Civil Engineering at Rensselaer Polytechnic Institute in 1934 and 1937, respectively. After eight months as a structural detailer with the American Bridge Company, he decided to change his career focus and attended

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President's Comments



Joe Waxse, President
Nebraska Section, ASCE

Greetings Fellow Engineers,

It makes me proud to be affiliated with all of you who have been contributing to the good works of ASCE and the advancement of the engineering profession!

The Future City competition was once again a big success due largely to your hard work and dedication. Special thanks to all of the organizers, judges, and mentors who took time out of their busy schedules to portray such a positive image of engineering to our

community. I'd particularly like to thank Dennis Wilson, City of Omaha Design Engineer, for being such an inspirational and humorous featured speaker!

January's joint UNL Student Chapter/ Water Resources meeting in Lincoln was well planned, executed and attended. The students did a great job updating everyone on their activities and achievements and providing plenty of pizza for some pretty big eaters! (myself included) Mark Wagner arranged for Michael Linder, Director of the Nebraska Department of Environmental Quality to speak at the meeting. He provided insight on the effect of recent federal environmental legislation on the NDEQ and Nebraska. (It was an enjoyable talk, even if he wouldn't let us tell any Lawyer jokes)

February's geotechnical section meeting and seminar features the geotechnical icon and ASCE Honorary Member, Dr. Ralph B. Peck! Joining him at the seminar will be a host of nationally recognized speakers. Miss this one and you'll be kicking yourself afterwards!

The Professional Engineering Coalition (PEC) is up and running! The purpose of PEC is to increase the awareness and involvement of each of the member professional organizations with legislation affecting our profession and to build consensus in our position on the issues. ASCE National awarded us over \$1600 in Public Relations and Merit Grants and the Board approved \$2000 for our first year's dues in the Coalition.

The Board approved placing an ASCE advertisement in the special Engineering Supplement to the Omaha World Herald on February 20th in honor of National Engineer's Week. We are also sponsoring a recurrent anti-drug message spot on WOW radio for one day during Engineer's Week. Look for the article in the Engineering Supplement about Future City and ASCE. Please thank Kirby Woods for his help with the article!

We have already accomplished a lot of good things this year! Thanks again to all of you who are so generously contributing your time and efforts. You are really making a positive difference!

Speaker, Continued from Page 1

the Soil Mechanics classes of Professor Arthur Casagrande at Harvard until 1939. At that time, Dr. Karl Terzaghi became a consultant to the City of Chicago for the design and construction of the Initial System of Chicago Subways and Peck became Dr. Terzaghi's representative on the job. He was in charge of soil testing and field observation until the work closed for World War II, when he became Chief Engineer of Testing on the construction of an ordnance plant in Marion, Ohio. In December of 1942 he joined the Civil Engineering Department of the University of Illinois at Urbana, from which he retired in June of 1974, as Professor of Foundation Engineering, Emeritus.

Through his academic career, Professor Peck's main interest has been observation of the behavior of earth and rock during construction and under stress. He has been equally concerned with the organization of and presentation of new knowledge in this field in a form that is useful to the practicing engineer. To this end, he is the co-author of two books, one with Karl Terzaghi, "Soil Mechanics in Engineering Practice", and one with Walter E. Hanson and Thomas H. Thornburn, "Foundation Engineering". Both of these texts are directed to the needs of the designer and constructor. He is also the author of over 200 technical papers, some of which have been included in the book, "Judgement in Geotechnical Engineering—the Professional Legacy of Ralph B. Peck", which appeared in 1984.

He has been a foundations consultant for numerous structures including buildings, ore docks, and other heavily loaded structures. Notable projects include tunnels and open cuts for the Bay Area Rapid Transit System in San Francisco, the Washington Metropolitan Area Subway and the Baltimore Rapid Transit System, and on dams including Mica Dam, Bennett Dam, and the Churchill Falls and James Bay Hydroelectric projects.

Dr. Peck was President of the International Society for Soil Mechanics and Foundation Engineering from 1969 to 1973. He has been the recipient of the Norman Medal, the Wellington Prize, the Karl Terzaghi Award, and the Presidents' Award of the American Society of Civil Engineers; the 1972 National Society of Professional Engineers' Award, the 1973 Moles Non-Member Award, the 1983 Golden Beaver Award, the 1976 Washington Award, and the Outstanding Civilian Service Medal of the U.S. Army. In May of 1974, he received the honorary degree of D. Eng. from his Alma Mater, and in 1975 the National Medal of Science from President Ford. He is a member of the National Academy of Engineering.



Participate...in the
2000 ASCE Membership Drive.
Call 800-548-2723 (ASCE) or visit
ASCE's website at www.asce.org
for details!

DINNER RESERVATIONS

RSVP by noon on Friday 2/11/2000

In Omaha Area and Eastern Nebraska:
contact Bob Kalinski at (402) 894-2678 or
rdgge@rdgge.com

In Lincoln, or Central or Western Nebraska:
contact Daryoush Razavian at (402) 474-6320 or
drazavian@oaconsulting.com

A Note from the Editor

The deadline for the April edition of *The Nebraska Civil Engineer* is Friay, March 31, 2000. Send ideas for items that could be included in this newsletter, articles, or information to:

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c/o Rick Kaufmann
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CHANGE OF ADDRESS?

Please notify ASCE national of any address changes by calling 1-800-548-ASCE (2723) or contact them through their web site at <http://www.asce.org>. Address changes made at the national ASCE office are updated monthly at your local Nebraska section.

Upcoming 2000 Meetings

<u>Date</u>	<u>Group</u>	<u>Location</u>	<u>Organizer</u>
Feb 17	Geotechnical	Omaha	Loras Klostermann
Mar 16	Environmental	Lincoln	John Hartwell
Apr 13	Transportation	Omaha	Massoum Moussavi
May	(Annual Meeting)	TBA	Daryoush Razavian

Visit Us  **on the Web**

www.radiks.net/~neasce

Please note: Our URL and email address have changed.

Our goal is to make the Nebraska Section website a valuable reference source for the Members of the Section. Current and past editions of this newsletter, Section news, and information about ASCE-sponsored and other events can be found on the site, as well as links to our underwriters, and to other organizations. Direct any items of interest or comments to the Section Webmaster, Brad Chambers, at 444-6866 or neasce@radiks.net

Last Month's Meeting

Twenty-one people attended the January meeting at the UNL campus.

- | | |
|-------------------------|---|
| Brad Chambers - MAPA | Ken Almquist - Jacobson Helgoth |
| Dan Mahrt - Terracon | Gary Kuhn - Environmental Professionals |
| Rich Kotan - OPPD | Henry Walt - ASCE |
| Sara Kotan - Guest | Tim Papstein - TD2 |
| Cheryl Kotan - Student | Steve Nickel - Nickel |
| Mohamed Dahab - UNL | Kirby Woods - OPPD |
| David Admiral - UNL | Scott Gilliland - Tadros |
| Brad Levich - Terracon | Ryan Paradis - HDR |
| Joe Waxse - Terracon | Loras Klostermann - TD2 |
| Thomas Strauss - Nickel | Jeff Thompson - TD2 |
| Larry Briggs - NDOR | |

Balsa Wood Truss Competition

Mark your calendar for Engineers Week, February 20-26, 2000. One of the activities sponsored by ASCE during Engineers Week is the metro area High School Balsa Wood Truss competition. The competition will be held at the Oak View Mall, 3001 S. 144th Street. The testing machine that will load the trusses to failure will be set up on the main level just south of the glass enclosed elevators. The testing will start at 1:00 P.M. and run most of the afternoon. So, if you like to see the creativity of High School students, or just hear and see things get broken, join us at the Mall on Saturday, February 26, 2000. For any questions or further details, please call Bruce Harris at 221-4440 (W) or 498-0296 (H).

2000 Geotechnical Seminar
"Geotechnical Construction"

A geotechnical exploration is a crucial part of design, providing subsurface formation characteristics to be used in calculating the necessary foundation location and size. During construction, the geotechnical information that was used in design is further used and reviewed with respect to the actual conditions encountered. This year the geotechnical committee of ASCE Nebraska Section has put together a program that focuses on the construction aspects of geotechnical engineering. The seminar will be held at the Kiewit Conference Center on February 18, 2000. This program provides design, construction and testing insight into popular deep foundation methods and embankments. The program also includes presentations that highlight recent high-profile construction projects. We are honored to have the legendary Dr. Ralph P. Peck and Dr. Lymon C. Reese make presentations. Also providing presentations are Dave Anderson with Kiewit Company, Kevin Miller with PSI, Larry Olson of Olson Engineering, Dr. Mel Esrig retired from Woodward Clyde, Clyde Baker of STS Consultants, Ltd., and Dick Becker of Longfellow Drilling. Please plan to attend.

Loras A. Klostermann, P.E.
Chairman, ASCE Geotechnical Committee

E-WEEK BANQUET

FRIDAY, FEBRUARY 25, 2000

Sponsored by the Engineer's Roundtable

“Peter Kiewit Institute... from Concept to Reality and Beyond!”

A panel will present a variety of perspectives on the development of the Peter Kiewit Institute. Following short presentations by each of the following panelists, a brief question and answer session will conclude the evening's look at the area's most promising project for the state's future economic vitality.

Panelists:

Winnie Callahan, Executive director, The Peter Kiewit Institute
Ken West, Principal, The DLR Group
Mark Nienhueser, Vice President/Area Manager, Kiewit Construction Company
Jim Hendrix, Dean, College of Engineering and Technology
Wayne Dyksen, Dean, College of Information Science and Technology
Tim Carlson, Scott Scholar and Engineering Student, College of E & T

Program:

5:30 – 6:30 PM Optional tours of the PKI Building – Aksarben Campus, 67th & Pacific
6:15 – 7:15 PM Social hour at Holiday Inn Central – 3321 South 72nd Street
7:15 PM E-Week Banquet and Panel Discussion at Holiday Inn Central

Dinner Selections and Prices:

Roast Prime Rib \$30 per person
Chicken Cordon Bleu \$21 per person

Entrees include salad, vegetable, Chef's choice of potato, rolls, beverage and dessert.

In order to provide a total attendance count to the hotel banquet staff, only advanced reservations will be accepted. Advanced reservations, menu choices, attendee's names and payment must be received by 12:00 Noon, Wednesday February 23, 2000. Checks should be made payable to "E-Week Roundtable." Please clip the reservation form below (add an additional sheet if required), attach payment and send to the address shown. The building tours will be hosted by student ambassadors from PKI. If you or your company would like to sponsor the dinner for one or more of these students at a cost of \$25 each, please indicate so on the reservation form and include payment.

Send to: Phil Rossbach
HDR Engineering, Inc.
8404 Indian Hills Drive
Omaha, NE 68118-4049

Attendee's Name(s)	Quantity	Menu Choice	Total Cost
_____, _____, _____	____	Prime Rib x \$30	_____
_____, _____, _____	____	Chicken Cordon Bleu x \$21	_____
<input type="checkbox"/> Yes, I do want to sponsor student meals:	____	Student Meal x \$25	_____
		Total Cost	_____

Excitement About GeoDenver 2000 Mirrors Abundant Opportunities in the Field

Abundant funding for earthquake research, TEA-21, and rapid urbanization in arid and semi-arid areas of our country and the world are among the factors teaming up to make geotechnical engineering one of the most exciting fields in civil engineering today. This dynamic environment is mirrored in the interest already building for GeoDenver 2000, scheduled for August 3-8, 2000 at the Denver Technical Center Marriott, Denver, Colorado. "GeoDenver 2000 has received tremendous response from the geotechnical community - garnering nearly 600 abstracts for presentations," says program chair Dr. Sandra Houston of Arizona State University.

GeoDenver 2000 will build on the success of GeoLogan 97, presenting a wide range of issues characteristic of a congress, plus field demos, technical tours, and exhibits. Sessions will cover such topics as geophysical exploration, assessing soil and rock properties, site characterization, deep foundations, geosynthetics, environmental geotechnics, slope stability and dam safety, earthquake engineering, unsaturated soils, geoarchaeology, mining and tunneling, risk assessment, pavements and pavement subgrades, rock mechanics, construction, visualization and image processing, research and funding, and educational issues in geotechnical engineering.

According to Houston, earthquake simulation, and regions, and paving and modeling are providing rich opportunities for research as well as cooperative efforts between consulting and academia and are being highlighted at the Congress.

There will also be many sessions on unsaturated soils - an emerging hot topic with many geotechnical and environmental applications. With dramatic growth and development in arid and semi-arid areas, the profession is finding it essential to move beyond traditional soil mechanics to better understand unsaturated soils. Urbanization is creating changes in surface and ground water and these soils are often moisture sensitive and collapsible, creating differential settlement of structures.

Presentations on geosynthetics and geomembranes will explore the new materials available today and their application in highways, rail and other transportation systems, coastal and environmental engineering, and mining. They'll look at new ways geosynthetics can prevent mining waste from contaminating ground water, reinforce harbor infrastructure, prevent bridge scour, and reinforce bridge abutments. Environmental engineering applications presented will include covers for landfills, hazardous waste containment system, and steep cover systems.

GeoDenver 2000 will also address the "old and emerging" technology of augered, cast-in-place (ACIP) piles. New drilling equipment, grouts, and installation monitoring devices has made it possible to extend the use of cost-effective ACIP piles to both softer and harder soils and rocks than possible in the past. The session will explore advanced quality control systems, new design methods that have been field tested, and the behavior of ACIP pile grouts. The program marks a rediscovery of an old foundation system from a new perspective that will be of great interest to all foundation, structural, and materials engineers.

With the opportunities TEA-21 has opened, GeoDenver will also include several technical sessions on pavement, emphasizing advances in subgrade materials. Also featured will be advances in situ and nondestructive geophysical sampling methods particularly beneficial for covering large areas, such as in building highways.

For the complete conference details, including registration information, visit the conference website at www.asce.org/conferences/geo2000 or call ASCE at 1-800-548-2723.

The Nebraska Civil Engineer

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