

the news



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PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

1317 Spruce Street, Philadelphia, PA 19107

Vol. 62-7

76 Years of Excellence

APRIL/MAY, 1990

APRIL JOINT DINNER MEETING

Philadelphia Section, American Society of Civil Engineers
Philadelphia Post, The Society of American Military Engineers

TUESDAY, APRIL 17, 1990

OFFICER'S CLUB, U.S. NAVAL BASE, PHILADELPHIA

Cocktails - 5:30 P.M. Dinner - 6:30 P.M. Meeting - 7:30 P.M.

**SUBJECT: REPAIR AND INVESTIGATION OF ROOF TRUSS SYSTEM
IN THE ACADEMY OF MUSIC**

SPEAKER: MR. NICK GIANOPULOS, Chairman of Board, Keast & Hood, Structural Engineers
DR. HARRY HARRIS, Professor of Civil Engineering, Drexel University
(Rescheduled from December, 1989 meeting.)

SPECIAL FEATURE: VILLANOVA UNIVERSITY NIGHT

The ASCE Student Chapter, Faculty & Alumni of the Civil Engineering Dept. of Villanova University will be honored at this meeting. All students, faculty & alumni are cordially invited to attend.

FOR RESERVATIONS FOR THE **APRIL 17, 1990 MEETING**, PLEASE CALL PRESIDENT WEGGEL'S SECRETARY, KWEEING, AT (215) 895-2364. DINNER CHARGE: Members and Guests - \$18.00. Students - \$9.00. STUDENTS: If you prefer, you are welcome to attend the Meeting after Dinner, at no charge.

TECHNICAL GROUP ACTIVITIES

Geotechnical and Environmental/Water

Resources Group

April Meeting

DATE: **Tuesday, April 24, 1990, 7:00 P.M.**

Drexel University, LeBow Engineering Center, Hill Seminar Room, Market and 31st Streets, Philadelphia, Pa.

SUBJECT: **Superfund Project Management**

SPEAKERS: **Gary Brown, P.E.** and **Steve Croce, P.E.**, RT Environmental Services, Inc.

The myriad of guidance and procedures and site unknowns as well as competing principal responsible party objectives can make project success on Superfund projects difficult.

This presentation will examine how strong project management and construction management skills, combined with careful on-going technical oversight can address the competing needs of PRP committees and regulatory agencies.

An NPL Superfund remedial action project in Southeastern Pennsylvania will be used as a case study for presentation purposes. The action

involves opening an injection well, interim remedial measures and a comprehensive groundwater recovery and treatment system.

For further information, please contact:

Geotechnical

Dr. J.P. Martin

Dept. of Civil & Architectural Engineering
Drexel University, Philadelphia, PA 19104
215-895-2363

Water Resources/Environmental

Mr. Raymond E. Lees

Westinghouse Env. & Geotech. Services, Inc.
323 Norristown Rd., Ambler, PA 19002
215-542-9100

Structural Group

May Tour Planned

A tour of the **Mellon Bank Center**, presently under construction at 18th Street between John F. Kennedy Boulevard & Market St., Phila., will be held **Thursday, May 3, 1990, at 9:30 A.M.**

The tour will be guided by a representative of the New York Structural Engineering office of Irwin G. Cantor. Space will be limited to

approximately 25 attendees. Reservations are mandatory!

For meeting point, location and other details, please contact **David A. VanOcker, P.E.**, Chairman, Structural Group, c/o Christakis & Kachele, Inc., 6910 Ludlow St. Upper Darby, PA. 19082; (215) 352-7676

February Meeting on Bell Atlantic Tower

By **David VanOcker**, Chairman,
Structural Group

The Structural Group Dinner Meeting was held on February 28, 1990 at the Downtown Club, Phila.

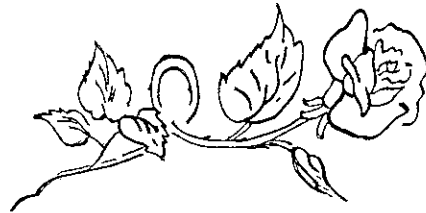
The speaker was **Dr. Prabodh V. Banavalkar**, Executive VP of CBM Engineers, Houston, Texas. Dr. Banavalkar presented a slide show and lecture on the Bell Atlantic Tower project recently completed at 18th and Arch Streets, Phila. He discussed the close interaction between his firm, the Architectural firm of Kling Lindquist Partnership, and the Construction Manager, Turner Construction.

Dr. Banavalkar highlighted the framing system studies that were performed, and the implications of various solutions in light of the limitations of the building footprint and narrow site.

General design considerations for lateral load resisting systems for highrise buildings and benefits/drawbacks of differing systems were presented to give the audience insight into the unique challenges faced on this project.

Acceleration of the floors under lateral wind loads is the controlling criteria for buildings such as this. The lateral restraint system was fine-tuned over the entire height of the building to keep floor acceleration within acceptable comfort levels for occupants. The final wind system: four "giant columns" at the corner of the building run uninterrupted vertically. These columns are braced in the short direction with eccentric braces: five-story deep Vierendeel trusses span across the north and south building faces. Floor framing was configured to transfer as much ver-

(Continued on Page 2)



!! HERE IT COMES !!

The Event We've All Been Waiting For!
The Fabulous Annual Dinner Dance
Saturday, May 5, 1990
 AT
Park Towne Place

2200 Benjamin Franklin Parkway, South Building, Philadelphia, PA
 Parking on premises

6:30 PM (Cash Bar)

Choice of Filet Mignon or Flounder "del mar" (stuffed with crabmeat)

Hot/Cold Hors d'ouerves

Bavarian Dessert Table • Ice Cream Cake

Music for your listening and dancing pleasure provided by

"Moments to Remember"

.....

PRESENTATION OF AWARDS

COME JOIN YOUR FRIENDS FOR FUN

Call or Send for your Tickets Today...Guests Welcome

— \$36.00 per person —

Consultants, Contractors, etc. — Reserve tables for your firms.

.....

Please make checks payable to "Phila. Section, ASCE" and mail to:

Robert M. Wright

(Dinner Dance Committee Chair)

Phila. Dept. of Streets; 920 Municipal Services Bldg.; Phila., PA 19102

(215) 686-5538

(Please indicate your choice of dinner entree)

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Our client is a well known and established manufacturing concern. They seek an individual to manage internal construction projects valued at 5-8 MM/yr. Will supervise 3-6 other construction managers. B.S.C.E. plus a minimum of 5 years experience in a medium to heavy industrial environment is required. Contact Jim McCarthy, Texcel, Inc. at 758-8202 or Fax 758-9753

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Technical Group Activities

(Continued from Page 1)

tical load as possible onto these columns.

The four giant columns were ultimately made out of structural steel (approximately 3,000 lbs. per linear foot). According to estimates by CBM, their preferred column construction of 7 feet diameter, 8,000 psi concrete columns would have saved approximately \$5 million. However, it was undesirable architecturally to express these larger elements. Combined with reservations on the part of the construction manager about the consistency of the higher concrete strength in this area, the steel giant column solution was used.

**Transportation and
 Urban Development Group**

As we head into Spring, we will round out the Group's Agenda with these exciting meetings:

April 12, 1990 - P. Talkis Salpeas

"Bustleton Transfer Station"

(Joint with IEBE)

May 24, 1990 - Sal Matina

"Newark Waterfront Connection"

For full details and reservations for these meetings, please contact **William T. Thomsen, P.E.**, Chairman. c/o Urban Engineers, Inc., 330 N. Third St., Philadelphia, PA. 19406, (215) 922-8080

THE PRESIDENT'S MESSAGE

This is my last opportunity as President to communicate with you all through THE NEWS since this is the last issue of the current year. "Time flies when you are having fun!" It has been a busy year for me as President. At times it seemed like we were operating a "floating craps game." With the closing of our old home at the Engineers' Club to accommodate our usual meeting times, we were forced to meet at various locations: The Holiday Inn in King of Prussia, the Drexel Student Activities Center, the Harbor League Club and the Officer's Club at the Philadelphia Navy Yard on April 17th. (the only location where we met more than once was the Holiday Inn in King of Prussia, where we met jointly with ASHE and then again last month jointly with our Reading Branch to hear **Winn Frank** talk about the "Chunnel"). We met jointly with the South Jersey Branch of ASCE, with ASHE, and we will meet on April 17th with SAME. We also arranged a joint meeting with the Association for Preservation Technology and with the Preservation Committee of the AIA only to be "snowed out" in December. We even had a Luncheon Meeting this year, the first I can remember. Now that we have had a sampler year, please let the Board of Directors know the location and type of meeting you prefer so we can plan for next year.

Looking back over the past year, we have made some progress, but there are many things that were left undone because of the difficulties posed by the variable meeting locations. We are still working on ways to encourage minorities to pursue careers in science and engineering; how to encourage more students to enter civil engineering; and how to encourage young Civil Engineers to join ASCE. **Ron Mersky** chaired a meeting of our ASCE Student Chapter advisors and set the stage to reactive the Student Paper Contest and Canoe Races. They recommend that we seek ways to encourage employers to pay at least a portion of the Professional Society dues for their younger engineers. **Moustafa Gouda** has proposed a scholarship program for minorities that the Board of Directors will discuss at our next meeting. **Bill Thomsen** has been active as our representative to the District 4 Legislative Affairs Committee and on the SEPTA Coalition. Expect to hear more about what is going on in Harrisburg and how it affects civil engineers.

Our Technical Groups have also been active, some more than others. We were elated to get a new leader for our Younger Member Forum, **Mohammed Syed**, only to lose him for an extended period of time to an overseas assignment. Here's an opportunity for a volunteer to assume the chairmanship of this Group. **Al Zion**, who completes a 2-year term as Director this year, has agreed to serve as the Chairman of our Management Group. (See the story elsewhere in THE NEWS.)

There are a number of individuals who deserve our thanks for their continued efforts on the part of the Philadelphia Section. They are the people who made my job easy over this past year: our Secretary, **Bob Wright**; our Treasurer, **Tom Branigan**; our President-Elect and Vice President, **Frank Depman**; and **Moustafa Gouda**; our Past-President, **Sue Lior**; and our Board of Directors. And last but not least, **Sid Robin**, the editor of our award-winning Section newsletter, who always keeps things moving by reminding me of the impending deadline to "get THE NEWS to the printer."

My best wishes to our incoming Directors and Officers, particularly to President Frank Depman who takes office at our Annual Spring Dinner Dance on May 5th at "Colleen's." While my term of office as President is coming to an end, I plan to continue working with the Board of Directors and lend my support to Frank. (I want to avoid the fate suggested by Sue Lior who, when asked what we should do with past Section Presidents, said we should "shoot them!") I hope that many of you will also become more active in ASCE. See you on April 17th at the Navy Yard and again on May 5th at "Colleen's!"

Sincerely,

J. Richard Weggel, President, Philadelphia Section, ASCE

Editorial

THE WEGGEL PRESIDENCY: "IMPOSSIBLE REALITY"

There may be some who are of the opinion that the January, 1990 issue of THE NEWS Section Profile "said it all" about Phila. Section President, **Rich Weggel's** talents and competency-and therefore, that this editorial is superfluous. Your editor begs to differ with such judgment, and he offers the illustrious record of Rich's tenure as confirmation.

The January THE NEWS profile demonstrated convincingly that Dr. Weggel was all things to all of his commitments, in most part those beyond his Philadelphia Section presidential obligations. This editorial commends and applauds him as his 1989-1990 tenure winds down to conclusion.

In his Section presidency, Rich Weggel exer-

cised his vigor and skill as an educator and Head of Drexel University Department of Civil and Architectural Engineering. He accomplished this - not in a purely pedagogic fashion, although his tutorial gifts are beyond criticism- but, more importantly, in a fraternal and cooperative sense, lending his capable hand at every juncture where help was needed.

In his Message when he assumed the presidency (see THE NEWS, October, 1989) Rich affirmed the National ASCE slogan: "Civil Engineering, *A People Serving Profession*" and declared that "...as ASCE members, we have the responsibility to serve the public and the Civil Engineering profession through service to ASCE..." Certainly, he would be the first to acknowledge that all of his objectives were not achieved in full or even in part. But the positives almost obliterate the negatives when the measures

of success are applied to his efforts. Rich kept a watchful eye and extended a dextrous hand to the Section's Technical Groups in helping to maintain and enhance their vitality. The Special Tasks and *Pro Tempore* Committees he oversaw, added immeasurably to the Section's contribution to the Profession and to the Community.

The ASCE Student Chapter programs in area colleges and universities-so close to his heart as a dedicated teacher-were fully supported and assisted by this generous man. The Section's Reading Branch was kept fully informed of our activities and functions, and was invited to participate in several Joint Meetings with us.

So there it is-though of necessity brief and incomplete-the answer to the skeptics who solemnly intoned that he simply could not possibly do it all. This is the response to their incredulity, and the membership of the Philadelphia Section, ASCE, has inherited the legacy of what J. Richard Weggel has done for it. We look forward with buoyant confidence to the many more years of his continued contributions of time, talent and innovation to the progress of our great organization.

And now, **Frank Depman**, we enthusiastically welcome you as the incoming President of the Philadelphia Section, ASCE for 1990-1991. We know from your past performances in the official hierarchy that you will continue to advance all of the great objectives of your predecessors and of the Section, with your fullest energies. We will all help you. Good Luck!!

ZION TO CHAIR ENGINEERING MANAGEMENT GROUP

Philadelphia Section, ASCE President Rich Weggel is pleased to announce the appointment of **Alvin Zion, P.E.**, as Chairman of the Section's Engineering Management Technical Group. He succeeds Edward F. Koehler, who recently resigned the post.

Presently completing a very productive two-year term as Section Director, Al also serves as a Director of the Delaware Valley Chapter of the American Public Works Association (APWA).

Al Zion currently works as a Project Manager for Hill International in Willingboro, New Jersey. He previously spent 26 years with the City of Philadelphia. His positions included being Director of Planning & Construction in the Recreation Department, and Chief Engineer in the Architecture & Engineering Division of the Public Property Department. He was responsible for managing design and construction of projects affecting a wide range of city facilities, that included City Hall, Municipal Services Building, Veterans Stadium, Civic Center, prisons, libraries, parks, recreation centers, and police and fire stations.

Al's education includes a BSCE from Penn State and a MSCE from the University of Pennsylvania.

The Section Membership congratulates Al on his assumption of leadership of this important Section affiliation, and looks forward to many new and progressive ideas and accomplishments in the Engineering Management Group.

MARCH JOINT DINNER MEETING

March 13, 1990

Holiday Inn, King of Prussia

THE JOINT BRITISH-FRENCH CHANNEL TUNNEL

By Bill Richards, Staff Writer

In a joint meeting of the Philadelphia Section, ASCE and its Reading Branch, more than 100 members, guests and students enjoyed pleasant conversation, a good meal, and an excellent speaker on a worldly subject. The principal speaker of the evening was **Winn B. Frank**, Senior Project Manager and Manager of Railroad Operations Analysis, DeLeuw, Cather & Company, Consulting Engineers, Baltimore, MD, on the subject: "The Joint British-French Channel Tunnel."

Widener University Night

Presided over by Presidents Rich Weggel, Philadelphia Section, and Kin Y.C. Chung, Reading Branch, the meeting honored the ASCE Student Chapter, Alumni and Faculty of the Civil Engineering Department of Widener University. A strong contingent from Widener attended. **Dr. Ronald Mersky**, Professor of Civil Engineering, and Faculty Advisor of the ASCE Student Chapter, described their rapidly growing Civil Engineering program, as well as the restructuring of the curriculum to allow for more senior electives. Ron then introduced Student Chapter President **Glen M. Vogel**.

An Ambitious Agenda for the Chapter

Mr. Vogel thanked the host Section and Branch for their courtesies and recognition of the Student Chapter, and presented his fellow officers and faculty member: **Susan Sutton**, Vice President; **Amy Ward**, Secretary; **Brian Perry**, Treasurer; and **Craig Mummert**, Student Government Senator; and faculty member, **Dr. Vicki Brown**, Professor of Civil Engineering.

Glen described the Chapter's busy activities program, which has been highlighted recently by visits to the Chester Trash-to-Steam conversion facility and the New York City North River Wastewater Treatment Plant.

The "Euro-Tunnel"

Following announcements of interest of upcoming activities by Dr. Chung and Phila. Section Vice-President **Frank Depman**, Dr. Weggel introduced our principal speaker, **Winn B. Frank**, for the evening's presentation.

The joint British-French Channel Tunnel, or "Euro-tunnel", is presently under construction beneath the English Channel, with operation scheduled for mid-to-late 1993. The concept of a tunnel connecting England and France by land transportation has been discussed since Napoleon's time. With inspiration from the Suez Canal construction, plans had been developed but national sensitivities and British-French rivalry had prevented any substantive action over the last two centuries. Queen Victoria had opposed a tunnel to avoid "influences from the continent" and although effort on service shafts even got underway in the 1920's, politics always seemed to prevent action.

The present effort to forge a new European Community and the regulations to take place by

1992 easing restrictions between the European Community nations, have made the renewal of the tunnel possible. The tunnel will serve as a major transportation link between England and the rest of the continent. It will consist of three primary tunnels, two running tunnels with one-way rail tracks, and a service tunnel running parallel to them. The tunnels will be 31 miles long, with the running tunnels 25 feet in diameter and the service tunnel just under a 16-foot diameter. Twenty-three miles of the tunnel will be physically located under the Channel proper.

Three types of trains will travel in the tunnel. In addition to conventional passenger and freight trains, there will be "shuttle trains" to convey automobile traffic. These shuttles will act as underground ferries with special loading and unloading features, air-conditioning, and ventilation systems. An international consortium has been developed to produce these shuttle cars. Passage through the tunnel will average 35 minutes (maximum speeds of 80-100 mph) and will make a three hour run between London and Paris possible. Conceivably there can be up to 18 trains in the tunnel network at one time.

The Euro-tunnel is owned by a British-French consortium. Construction is being undertaken by ten contractors, five British and five French. A separate structure serves the construction management and oversight function. Financing is conducted through five banks heading a worldwide 80 bank syndicate.

Construction has required the development of special tunnel boring machines, (TBM's) and there may be up to eleven TBM's in operation at one time. The tunnel is maximizing the extent that it can be bored through a "chalk mark" formation beneath the Channel and about 65-118 ft. thick. This is because that formation is impermeable to water and relatively easy to bore through. Only on the French side must it be necessary to go through fractured geologic layers where water may present a problem. To date construction on the service tunnels is on schedule, the rail tunnels on the French side are ahead of schedule, and the British side is somewhat behind.

Question and Answer Period

The presentation was followed by a series of interesting and probing questions. Mr. Frank specifically referred to the student members present with the hope that this project might serve as an inspiration to them to continue in their chosen career path. We believe that it will and thank Winn Frank for his very enlightening and articulate discussion.

Geotech Conference

The Geotechnical Division of ASCE, announces a specialty conference on "Design and Performance of Earth Retaining Structures." Cornell University, Ithaca, NY on **June 18-21, 1990**. For more information, contact **Mr. Don McMahon**, GZA at (716) 685-2300.

NOMINATIONS FOR OFFICE PHILADELPHIA SECTION, ASCE-1990-1991

In accordance with the Constitution and By-Laws of the Philadelphia Section, ASCE, the Nominating Committee appointed by President J. Richard Weggel has submitted the following slate of nominees for elective office for the 1990-1991 administrative year:

President-Francis J. Depman (one year)
President-Elect (First Vice President)-Moustafa A. Gouda (one year)
Second Vice President-Klaus K. Fuelleborn (one year)
Secretary-Robert M. Wright (two years)
Assistant Treasurer- Darin L. Gatti (two years)
Director-Sheldon A. Kinbar (two years)
Director-Joseph P. Martin (one year- to complete the unexpired term of David I. Wismer)
Director-William H. Polk (two years)
Director-David A. VanOcker (two years)
Director for Reading Branch- (one year)

To be announced

Offices in which incumbents have one year remaining to serve are:

Treasurer-Thomas J. Branigan
Membership Secretary-Drew S. Mihocko
Director-Patrick R. Cairo
Director-William G. Richards
Past Presidents to serve on the Board of Directors:

Norman G. Weintraub (one year remaining)
Susan K. Lior (two years remaining)
J. Richard Weggel (three years)

The above slate of nominees was announced by President Weggel at the Philadelphia Section Joint Meeting with the Reading Branch on March 13, 1990 at the Holiday Inn in King of Prussia, PA. If no additional nominees shall have been submitted and received, in accordance with the Section's Constitution and By-Laws, by April 1, 1990, the above listed slate of nominees shall have been declared elected at that time and will be installed at the Section's Annual Dinner Dance at the Park Towne Place (Colleen's) on Saturday evening, May 5, 1990.

Members of the Nominating Committee are: Susan K. Lior, Chairman; Sidney Robin, Joseph R. Synchronick, Albert M. Tantala, J. Richard Weggel, and Norman G. Weintraub.

ENJOY YOUR SUMMER!!

On behalf of the Officers and Board of Directors of the Philadelphia Section, ASCE, the staff of THE NEWS extends to all the Members and their families best wishes for healthy and pleasant Spring, Summer and Fall seasons.

We look forward to seeing you all at the first meeting of the Section's 1990-1991 season in October, 1990. Watch for the October, 1990 issue of THE NEWS.