

the news



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PHILADELPHIA SECTION
AMERICAN SOCIETY OF CIVIL ENGINEERS
P. O. Box 58186, Philadelphia, PA 19102-8186

Vol. 63-3

Our 77th Year

January 1991

Greetings of the Season

The Editor and Staff of THE NEWS, on behalf of the Officers and Board of Directors of the Philadelphia Section, ASCE, extend to the Members and their Families Heartiest Wishes for a Joyous Holiday Season, and a Healthy, Prosperous and Fulfilling new Year.

JANUARY JOINT DINNER MEETING

Philadelphia Section and Reading Branch, American Society of Civil Engineers
Delaware Valley Section, American Society of Highway Engineers (ASHE)

WEDNESDAY, JANUARY 9, 1991

Location: HOLIDAY INN, Goddard Boulevard, King of Prussia, PA
(See Location Map Below)

SUBJECT: ENGINEERING OF THE 90s - CHALLENGE AND OPPORTUNITY

SPEAKER: E. ROSS FORMAN, P.E., Director of Automation Technology, Day & Zimmerman, Inc., Consulting Engineers, Philadelphia, PA. 1990 Delaware Valley Engineer of the Year.

This decade will challenge engineers more than at any other time within our memories. Solutions will be required for the overwhelming amount of solids waste, energy shortages and longer living populations compressed into the same amount of space. Transportation routes will be choked as lead times for new solutions become unacceptable.

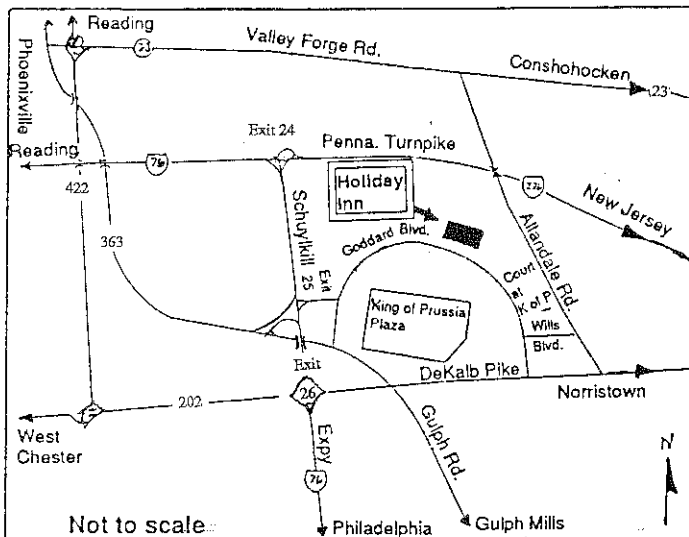
All engineers, from vice-president to the new graduate, will be faced with new areas of application, largely computer based. This will include the new 3D technology and artificial intelligence.

The use of artificial intelligence will challenge the engineer to exercise a new form of judgement since the computer will now contain more facts than can be learned in a lifetime.

As a result of the increasing use of sophisticated computer driven technology to solve the problems facing our economy the engineer has the opportunity to assume increasing importance in our society. However, it also imposes great challenges to absorb the profound advancements in technology.

A registered Professional Engineer in Pennsylvania and three other states, E. Ross Forman holds a B.S.

(Continued on Page 2)



**LOCATION MAP
for
Holiday Inn,
Goddard Blvd.,
King of Prussia**

**TECHNICAL GROUP ACTIVITIES
Geotechnical and Environmental/Water
Resources Group**
(Combined program for 1990-1991)

January Meeting

Date: Tuesday, January 22, 1991 - 7:00 p.m.

Location: Hill Seminar Room, Le Bow Engineering Center, Drexel University, 31st & Market Streets, Philadelphia, PA

SPEAKER: Mr. Joseph Mihm, P.E., Project Manager, Canonic Environmental Services Corp., King of Prussia, PA

SUBJECT: Thermal Treatment of Contaminated Soils

This presentation describes two types of technologies used in remediation of contaminated soils: LTTA (low temperature thermal aeration), and the high temperature TANIUK system. Both can be used for on-site remediation using mobile processing units. A case history is included for the Cannons Superfund site in Bridgewater, Massachusetts, where 11,000 tons of soil contaminated with PCB's were to be treated. The LTTA system was used, and the basis for its selection, as well as the design and construction are discussed.

For further information, please contact **Dr. J.P. Martin**, Chairman, Geotechnical Group, (215) 895-2363 or **Mr. Raymond A. Lees**, Chairman, Environmental/Water Resources Group, (215) 542-9100.

Structural Group January Meeting

Date: Thursday, January 24, 1991 - 7:00 p.m.

Location: Hill Seminar Room, Le Bow Engineering Center, Drexel University, 31st & Market Streets, Philadelphia, PA

SUBJECT: New Jersey State Aquarium (Camden Aquarium)

SPEAKER: Todd R. Heacock, P.E., Senior Associate, Paulus Sokolowski & Sartor, Inc., Structural Engineers

Mr. Heacock will discuss the variety of complex engineering issues and decisions involved with the new aquarium. Highlights will include the At-

(Continued on Page 4)

RESERVATION FORM FOR PHILADELPHIA SECTION ASCE FEBRUARY DINNER MEETING TUESDAY, FEBRUARY 12, 1991 - WILLIAMSON'S, GSB BUILDING, PHILADELPHIA

Please reserve _____ dinner(s) at \$25.00 each. Check enclosed \$_____.

Students - \$12.50 (Group Reservations by Faculty Advisors). You are welcome to attend all Section Meetings after Dinner, at no charge.

Name _____

Address _____

Phone _____

Please return with payment to: **ASCE**
P.O. Box 58186
Philadelphia, PA 19102-8186

Reservations must be postmarked no later than **February 4, 1991**.
Tickets will be issued at the door.

IMPORTANT: Dinner Reservations for ALL Section Meetings Are Essential. Please mail in Your Reservation Coupon As Directed.

FEBRUARY JOINT DINNER MEETING

Philadelphia Section, American Society of Civil Engineers
Delaware Valley Chapter, American Public Works Association (APWA)

TUESDAY, FEBRUARY 12, 1991

Location: WILLIAMSON'S, GSB Building, City Line Avenue, Phila.
(Location map will appear in the February, 1991 issue of THE NEWS).
Cocktails - 5:30 p.m. Dinner - 6:30 p.m. Meeting - 7:30 p.m.

SUBJECT: INFRASTRUCTURE - THE CRUMBLING OF AMERICA

SPEAKER: ALBERT M. TANTALA, P.E., President, Tantala Associates, Inc., Consulting Engineers, Philadelphia; Past President, Phila. Section, ASCE.

America is getting out of shape! Under the exigencies of tight budgets and inflation, the maintenance of public facilities has been postponed, and new construction has been cancelled to the point where the quality of life of virtually every American is now being adversely affected. Mr. Tantala, an experience authority on this subject, will probe the problem and articulate vital attacks and solutions.

DON'T MISS THIS IMPORTANT MEETING!

SPECIAL FEATURES: Awards Of Life Membership Certificates; Swarthmore College Night

**PLEASE FILL OUT AND RETURN RESERVATION COUPON
AS DIRECTED ABOVE - FOR THE FEBRUARY 12, 1991 MEETING**

January Meeting

(Continued from Page 1)

in Mechanical Engineering and an MBA from Drexel University. He joined Day and Zimmerman in 1978 as Manager of the Instrumentation Department and assumed his current title in 1988. The firm is a \$500 million engineering and professional services company, headquartered in Philadelphia.

Today, he is involved in the complex task of automating continuous process plants so that they produce products in the most efficient, safe and profitable manner.

Mr. Forman is currently the Vice-President of the Industries and Sciences Department of the International Instrument Society of America, and received the Golden Achievement Award in October 1989. His office contains the activities of virtually all industries that are automated, including power, textiles, chemical and petroleum, as well as foods and pharmaceuticals.

Mr. Forman was involved in youth activities with the Boy Scouts of America and currently is on the Board of Alpha Phi Omega, the National Service Fraternity. He has been an Adjunct Associate Professor at Drexel University and is on the Industrial Advisory Committee for the Mechanical and Manufacturing Engineering Department of Spring Garden College where he is immediate Past Chairman.

SPECIAL FEATURE: UNIVERSITY OF PENNSYLVANIA NIGHT

The ASCE Student Chapter, Faculty and Alumni of the Civil Engineering Department (Branch of the Department of Systems) of the University of Pennsylvania will be honored at this meeting. All students, alumni and faculty are cordially invited to attend.

Engineering Management Group Seeks Members

The November-December 1990 issue of THE NEWS published a questionnaire by Al Zion, Chairman of the Phila. Section Engineering Management Technical Group, requesting input from the Section membership in order to formulate programs for the Group.

Those Section members who are interested in participating are urged to fill in and return the questionnaire coupon to: **Alvin Zion**, c/o Hill International, Inc., One Levitt Parkway, Willingboro, NJ 08046; or phone him at his office - (609) 871-5100, or - (215) 977-7750.

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**COPY DEADLINE
FOR
FEBRUARY 1991
ISSUE
JANUARY 9, 1991**

NOVEMBER DINNER MEETING

November 27, 1990

Downtown Club

INNOVATIVE STRUCTURAL SYSTEMS

By Bill Richards, Staff Writer

A splendid crowd of more than 120 Philadelphia Section members and guests; and students, faculty and alumni of the Civil Engineering Department of Temple University, enjoyed the outstanding November Dinner Meeting at the resplendent Downtown Club in Center City Philadelphia. Principal speaker was **Leslie E. Robertson, P.E.**, President, Leslie E. Robertson Associates, Consulting Engineers, New York City. Mr. Robertson's subject was: "Innovative Structural Systems in High-Rise Buildings." Phila. Section President **Frank Depman** resided.

Temple University Night Student Chapter Chartered

The meeting highlighted the ASCE Student Chapter, Faculty, Alumni and Civil Engineering Department of Temple University. Inasmuch as the Department recently has been granted full accreditation, national ASCE has issued Temple's formerly designated ASCE Student Club its initial full Charter as an ASCE Student Chapter. Faculty Advisor, **Dr. Bechara Abboud** and Section President **Depman** made the Charter presentation to Student Chapter President **Bryan Birosak**.

Dr. Schmitt Summarizes Programs

Dr. Frederick C. Schmitt, Chair of Temple's Civil Engineering Department, thanked the Phila. Section for its courtesies and introduced the sizable Temple contingent attending the meeting. Dr. Schmitt presented an overview of the Department's staff and programs. There are now eleven full-time Faculty members, and several Adjunct Faculty. He expressed his gratification at the granting of full accreditation to the Engineering College.

President Birosak Reviews Chapter Activities

Temple ASCE Student Chapter President **Birosak** acknowledged the dedicated work of his fellow officers and Chapter members, and he introduced them: Vice President, **Phu Tran**; Secretary, **Frank Russo**; Treasurer, **Mark Schroder**; and Past-President **Maria Villanti**. Bryan reviewed the busy agenda of the Chapter's activities, which includes technical meetings, social and athletic activities.

Outstanding Membership Growth Award to Phila. Section

Phila. Section Past President **Chuck Pennoni** (1978-1979) and current National ASCE President-Elect displayed the handsome Banner of Merit for Outstanding Membership Growth, recently awarded to the Phila. Section by National Headquarters for leading Zone 1 in recruitment of new members to ASCE. Chuck acknowledged Section Past President **Rich Weggel** (1989-1990), who headed the Philadelphia Section recruitment drive.

Chuck also presented a National ASCE Award to Section Past President **Joseph R. Syrnick** (1980-1981). (see separate article elsewhere in this issue of THE NEWS).

VanOcker Introduces Mr. Robertson

David A. VanOcker, Chairman of the Section's Structural Technical Group, who arranged the November meeting, introduced the principal

speaker of the evening: **Lester E. Robertson**.

Les is President of the New York consulting engineering firm that bears his name and which he established in 1982. He majored in Electrical and Civil Engineering at Cal-Berkeley. He has established an impeccable list of credentials and has been awarded two honorary Doctorships. His accomplishments include: The Bank of China Building in Hong Kong, the fifth tallest building in the world and of composite design; the twin towers of the New York World Trade Center; the AT&T Building in NY; the glass-cathedral PPG Building in Pittsburgh; and numerous others. In addition to his engineering practice serving clients on five continents, Les devotes his time to causes ranging from nuclear disarmament to engineering research. Les was the Engineering News Record Man of the Year in 1989.

Innovative Design Systems

Les presented a very visually stimulating presentation on composite structural systems used in designing and constructing unique modern high-rise buildings, with many spectacular slides of designs and actual sites. He featured many new leaning buildings, typically with angles of 15 degrees, such as the Dominos' Pizza World Headquarters which is cantilevered over a lake; the Puerta de Europa buildings in Madrid; and the Barcelona World Trade Center.

The eccentric weight of these leaning buildings provide unique challenges in design and construction. The gravity induced overturning moment creates the need to limit deflection in the direction of the cantilever. Strength is not an issue but deformation, particularly that of concrete over time, is a problem that must be resolved. Post-tensioning, or the introduction of an oppositely directed turning moment for deflection control, was explained. Post-tensioning is generally introduced in the latter stages of construction, after the base structure is in place, but before the building weight is in place. It is frequently anchored at the roof and pulling in the opposite direction of the turning moment. Post-tensioning can be introduced in the middle of the building, as well as the top, but this increases construction time as two different systems are required.

Mr. Robertson continued his slide show with numerous exhilarating slides of the construction of the Bank of China Building. Obviously, safety regulations are not as strict in Hong Kong as in the U.S., and the skills of the high-rise construction workers (and the photographer!) were graphically illustrated by these photos.

Question and Answer Period

The interest generated by Les' presentation was reflected in the penetrating questions and comments from members of the audience, on the exciting concepts which were so scholarly described by our distinguished speaker.

Mr. Robertson called particular attention of the students in attendance to their future engineering opportunity environment upon graduation. He cautioned that the current declining activity in major

construction projects should not discourage those who contemplate entering the structural design engineering field. He encouraged students to familiarize themselves with European and Latin American engineering and construction concepts and techniques and methods of practice.

President **Depman** congratulated Mr. Robertson on behalf of the Section for his fine presentation. The Section is indebted to Structural Group Chairman **Dave VanOcker** for his usual thorough and excellent job in arranging this great meeting.

SYRNICK HONORED BY NATIONAL ASCE

Joseph R. Syrnick, Chief Engineer and Surveyor, Phila. Department of Streets, and Past President (1980-1981) of the Philadelphia Section, ASCE, has been named *National ASCE Zone 1 Government Engineer of the Year, 1990*. The beautiful plaque certificate award was made to Joe by National ASCE President-Elect **Chuck Pennoni** at the November 27, 1990 Section meeting at the Downtown Club.



ASCE President-Elect **Chuck Pennoni** (l.) presents National ASCE Government Civil Engineer of the Year Award to **Joe Syrnick**.

Joe Syrnick directs the Streets Department's Engineering Division, nearly 200 employees - is responsible for all highway design, bridge design and construction, surveying and road records for Philadelphia' 2,600-mile roadway network and 300 bridges. He has served the Department of streets for nineteen years and was appointed Chief Engineer and Surveyor in 1987.

Joe has continually been active in the Philadelphia Section and has held various positions on the Section's Board of Directors, before becoming President. He serves as Associate Editor of THE NEWS, the Section's monthly newsletter. His contributions were recognized by the Section in 1986, when he received the Section's Government Engineer of the Year Award. He is also an active member of the American Public Works Association.

Syrnick received his Bachelor of Science degree in Civil Engineering from Drexel University in 1969 and a subsequent Masters degree from Drexel in 1971.

Joe is very active in community affairs. He has served on the boards of several neighborhood and city-wide clubs and associations, including several United Way organizations. He has additionally instructed course at Drexel University and Philadelphia Community College.

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ASCE DUES BILL AND TECHNICAL GROUP DETAILS

Section members will notice in the 1991 dues bill from National ASCE Headquarters, that the PHILADELPHIA (SECTION) DUES is itemized as \$13.00. This amount includes assessment for membership in one Phila. Section Technical Group of your choice. *If you choose to be a member of more than one group, please add \$1.00 for each group.*

Also, because National's bill did not list the Technical groups to which your \$1.00 payments were to be applied, *you are requested to get in touch with the Chairman of the Technical Groups of your preference*, so that their membership lists can be classified.

The appropriate individuals to contact are the following:

Liaison

Klaus K. Fuelleborn
Pennonni Associates, Inc.
594 S. West End Blvd.
Quakertown, PA 18951
(215) 561-0460

Younger Member Forum

President position available.

If interested, please contact Klaus Fuelleborn (See "Liaison" above).

Construction

Fredric L. Plotnick, Chairman
Engineering & Property Mgt. Consultants
806 Hilton Lane
Elkins Park, PA 19117
(215) 885-3733

Structural

David A. VanOcker, Chairman
Christakis & Kachele, Inc.
6910 Ludlow Street
Upper Darby, PA 19082
(215) 352-7676

Transportation & Urban Development

William T. Thomsen, Chairman
Urban Engineers, Inc.
330 N. Third St.
Philadelphia, PA 19406
(215) 922-8080

Engineering Management

Alvin Zion, Chairman
Hill International, Inc.
1 Levitt Parkway
Willingboro, NJ 08046
(609) 871-5800
(215) 977-7750

Geotechnical

Dr. Joseph P. Martin, Chairman
Drexel University
Civil Engineering Dept.
32nd & Chestnut Sts.
Philadelphia, PA 19104
(215) 895-2363

Water Resources & Environmental Engineering

Raymond A. Lees, Chairman
Westinghouse Environmental & Geotechnical Services, Inc.
323 Norristown Rd., Suite 206
Ambler, PA 19002
(215) 542-9100

IMPORTANT! 1990-1991 MEETING NOTICES

MARK YOUR CALENDAR for the dates of the remaining Philadelphia Section, ASCE monthly meetings and social functions, as follows:

ALL DINNER MEETINGS

Cocktails – 5:30 p.m. Dinner – 6:30 p.m. Meeting – 7:30 p.m.

STUDENTS: All dinner and luncheon charges one-half price. If you prefer, you are welcome to attend all meetings after dinner or luncheon, at no charge.

Tuesday, March 12, 1991 – Dinner Meeting, HARBOR LEAGUE CLUB, Camden, NJ

Joint Meeting with South Jersey Section, ASCE

Subject: **Port Coordination**

Speakers: **John Larue**, President, Phila. Regional Port Authority; **Susan Howland**, Director of Communication, Port of Phila. Maritime Exchange; **Col. Kenneth Clow**, Phila. District Engineer, U.S. Corps of Engineers.

Widener University & Villanova University Night

Wednesday, April 10, 1991 – Dinner Meeting, OFFICERS' CLUB, US Naval Base, Phila.

Joint Meeting with Phila. Post Society of America Military Engineers (SAME)

Subject and speaker to be announced.

Spring Garden College Night

Saturday Evening, June 1, 1991

Annual Spring Dinner Dance – HOLIDAY INN, City Line Ave., Phila.

WRIGHT SUBMITS SECTION'S ANNUAL REPORT

Philadelphia Section Secretary Robert M. Wright has submitted to ASCE National Headquarters the *Annual Report, Philadelphia Section, ASCE, Fiscal Year October 1, 1989 – September 30, 1990.*

As required by the National Society By-Laws, the Annual Report of the Section Activities, Finances and Membership summarizes monthly meetings; technical, social and educational programs and operations. It includes data on Zone 1 and District 4 participation; the Reading Branch of the Philadelphia Section; Technical Groups; Committees; Publications, Younger Member participation, encompassing the ASCE Student Chapters and Clubs in area colleges and universities; Section Prizes, Awards and Scholarships; and other subsidiary affiliations.

The Report conveys information helpful to the National ASCE Board of Direction, the Committee on Local Sections and District Councils, Headquarters staff and other Sections – in evaluating Philadelphia Section affairs. It is also a prime prerequisite for the payment by National of the annual financial allotment to the Section.

In addition to Intra-Section programs and functions, the volume describes in detail the Section's participation in Intersociety Council of Delaware Valley (ETSCO); Annual Engineers' Week Committee of Delaware Valley; Joint Meeting annually with the Society of American Military Engineers (SAME); the Philadelphia Urban Manpower Program (PUMP); Opportunities in Engineering for Minorities; Construction Career Day Conferences; and many others.

In recognition of the fine, dedicated work Bob has performed on its behalf these many years on the Annual Report and a myriad of other services, the Philadelphia Section extends its highest plaudits and appreciation to Secretary Wright for this excellent publication.

Syrnick Honored

(Continued from Page 3)

In accepting the Award, Joe thanked the Section for nominating him and paid tribute to all the dedicated public works employees of the City for their sense of service and pride in their work. "... I accept the Award on behalf of all the Civil Engineers and other individuals in the public sector..."

The Philadelphia Section is very proud that one of its most dynamic members has received this prestigious recognition, and we congratulate him on the achievement.

Technical Group Activities

(Continued from Page 3)

lantic Ocean and Coral Sea tank structures as they are integrated within the overall building framing system. Slides will show various stages of construction on this \$42 million dollar project, which is scheduled to open in 1992.

If you are interested in joining us for this informal meeting (snacks and refreshments will be provided,) please make your reservations with: **David A. VanOcker**, Chairman, (215) 352-7676.

JOSEPH A. SCHULCZ

With deep sadness, THE NEWS announces the death, on November 15, 1990, of **Joseph A. Schulcz**, at age 82. One of the Philadelphia Section's most prominent members, he was Section President in 1952-1953.

Friends may make contributions in his memory to St. Ignatius Nursing Home, 4401 Haverford Avenue, Philadelphia, PA 19104.

A full article on this distinguished Section member will appear in the February, 1991 issue of THE NEWS.