

the news



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AMERICAN SOCIETY OF CIVIL ENGINEERS
1317 Spruce Street, Philadelphia, PA 19107

VOL. 55 - 2

OUR 70th YEAR

November, 1982

NOVEMBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

TUESDAY, NOVEMBER 9, 1982

Engineers' Club, 1317 Spruce Street, Philadelphia

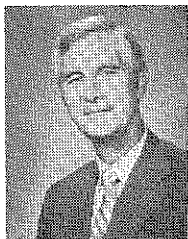
Cocktails — 5:30 P.M. Dinner — 6:30 P.M. Meeting — 7:30 P.M.

SUBJECT:

THE HYATT-REGENCY WALKWAY COLLAPSE

SPEAKER:

DR. EDWARD O. PFRANG, Chief, Structures Division, Center for Building Technology, National Engineering Laboratory, National Bureau of Standards, Washington, D. C.



On Friday evening, July 17, 1981, two of the overhead suspended walkways spanning the atrium of the Kansas City Hyatt-Regency Hotel crashed to the main floor below during the weekly tea dance. One Hundred Fourteen people were killed and One Hundred Eighty-five were injured. It was the worst disaster ever to happen in the United States in terms of loss of life and personal injury due to a structural collapse.

Dr. Edward O. Pfrang headed the National Bureau of
(continued on page 2)

DECEMBER DINNER MEETING

TUESDAY, DECEMBER 14, 1982

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

SUBJECT:

"PROFESSIONAL ENGINEERING LIABILITY"; A ROUND TABLE DISCUSSION.

SPEAKERS:

REEDER R. FOX, Esq.; Partner, Duane, Morris and Heckscher; Phila., Pa.
GREGORY D. KUMM, Asst. Vice President, Schinerer Co., New York City.
IRVIN E. RICHTER, Esq.; President and Chief Executive Officer; Hill International, Inc; Willingboro, N. J.

The information that will be presented at this meeting may very well be instrumental in assisting you to make decisions that could protect and enhance your professional status and your income, as well as your accumulated wealth.

SPECIAL FEATURE:

TEMPLE UNIVERSITY NIGHT

Please call Mr. deKovacs at the Engineers' Club immediately (215 735-5234), for reservations.

STUDENTS — Plan to attend for Dinner (Half Price) or meeting after Dinner.

TECHNICAL GROUP ACTIVITIES

Construction

December Meeting

Date: Tuesday, December 7, 1982

Engineers' Club—7:30 P.M.

Subject: **A Primer to Project Control Computer Systems**

Speaker: **Les Seskin**, President, Promacon, Inc.

Program Host: **Fredric L. Plotnick**, Chairman, Construction Group

A la carte dinner at the Club prior to the meeting

Mr. Seskin will discuss both the theory of project control procedures and the growth of automated systems to permit their implementation.

—o—

Geotechnical

November Meeting

Date: Tuesday, November 16, 1982

Engineers' Club—7:00 P.M.

Subject: **Development of Ground-water Resources**

Speaker: **Dr. J. Halepaska**, Chief, Water Resources Division, Woodward-Clyde Consultants, Englewood, Colorado.

Program Host: **Dr. Ziyad I. Husami**, Chairman, Geotechnical Group

Historically, ground water development has followed three distinct steps: exploration, evaluation, and production. Exploration data is generally available for much of the United States today.

Since receiving his Ph.D. in Ground Water Hydrology from the New Mexico Institute of Mining and Technology in 1970, Dr. Halepaska has been involved in extensive research and applied ground water hydrology. Dr. Halepaska is a registered professional engineer.

(continued on page 2)

TECHNICAL GROUP ACTIVITIES
(continued from page 1)

At Woodward-Clyde Consultants, he has supervised numerous water resource projects.

Refreshments are served

—o—

Structural

November Meeting

Date: **Tuesday, November 9, 1982**

Sponsoring Main Section Meeting.
See Page One.

December Dinner Meeting

Date: **Thursday, December 9, 1982**

Engineers' Club—Cocktails: 5:30 p.m.
Dinner: 6:30 p.m.—Meeting: 7:30 p.m.

Subject: **Fabric Roof Structures**

Speaker: **David Geiger**, Principal, Geiger-Berger Associates, New York, NY

Program Host: **Stephen R. Golden**, Chairman, Structural Group

Geiger-Berger is one of the foremost engineering firms designing fabric roof structures today. A number of their designs were featured in the cover story of the August, 1980, **Civil Engineering** magazine. This topic is particularly current considering the reconsideration recently of placing a roof on **Veteran's Stadium**.

—o—

Transportation & Urban Development

November Dinner Meeting

Date: **Monday, November 22, 1982**

Engineers' Club
Dinner: 6:15 p.m.—Meeting: 7:00 p.m.

Subject: **Philadelphia — Visions and Realities**

Speaker: **G. Craig Shelter**, Acting Executive Director of the Philadelphia Planning Commission

Program Host: **David Novick**, Chairman, T & UD Group

Contact **Anne Marie Collins** at (215) 988-0696 (Mr. Novick's office) for information and reservations.



ATTENTION
STRUCTURAL GROUP MEMBERS

For those individuals who attended the January 1982 Structural Group meeting, "Design of the Connections Using the Eighth Edition AISC Manual" but who did not get the hand-outs, we have now received the information from AISC.

Members Needed

Over the past several years, the mailing list of the Structural Group has atrophied to 21 names. Anyone wishing to receive his or her own notice of up-and-coming meetings please contact Chairman **Steve Golden**, (215) 561-0460 or (609) 829-1118 or by mail at Pennoni Associates, Inc., 1911 Arch Street, Philadelphia, Pennsylvania 19103.

If one individual of each engineering firm and school in the area will contact Steve, he will send enough notices to be posted on the company bulletin boards so that everyone will be informed.

NOVEMBER DINNER MEETING

(continued from page 1)

Standards (NBS) team which investigated the tragic accident. Dr. Pfrang's presentation will include a 16 mm film of the hanger-rod connection failure.

Dr. Pfrang attained his B.S.C.E. degree from the University of Connecticut in 1951; his Masters degree in Structural Engineering from Yale University in 1952; and his Ph.D. in Structural Engineering from the University of Illinois in 1961. He joined NBS in 1966 — where he served, among other positions — as Chief of the Office of Housing Technology, evaluating and researching innovative building performance systems criteria. Prior to his service with the Bureau, he was for seven years an Engineering Educator and Researcher at the Universities of Nevada and Delaware; and a Structural Manager and Consultant Designer to major industrial companies.

Our speaker has published numerous papers, articles and reports. He is a Fellow of ASCE and a member of numerous other Technical Societies related to his field; as well as various honor societies. Dr. Pfrang is Chairman of the Joint U. S. - Japan Panel on the Design of Structures to Resist Wind and Seismic Forces. He is a Registered Professional Engineer in New York, California and Maryland, and he is the recipient of many honors and awards.

SPECIAL FEATURE:

VILLANOVA UNIVERSITY NIGHT

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

WOMEN'S AUXILIARY

November Joint Meeting

The next regular monthly Luncheon-Meeting of the Section's Women's Auxiliary will be held jointly with the Auxiliaries of A.S.M.E., and P.S.P.E. on **Thursday, November 18, 1982** at the Engineers' Club, 12:00 noon. A.S.M.E. is Hostess.

The topic is: "**Art Critique of the Madonnas of the Great Masters.**" The interesting subject with slide illustrations, will be presented by **Mrs. Philip Herr**.

A.S.C.E. Auxiliary members are urged to attend this meeting and all other meetings and functions and to bring guests. Also, please help to recruit wives of Phila. Section members to join the Auxiliary. For full particulars of membership application, please call Membership Secretary **Marie (Mrs. Kenneth J.) Zitomer**, at (215) 548-5324.

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OCTOBER MEETING

October 12, 1982 Engineers' Club

Editor's Note: THE NEWS thanks **Mr. W. Cho**, Graduate Student, Drexel University, for his excellent writeup of Dr. Pinder's talk.

A very good turnout of members and guests attended the first meeting of the Phila. Section, ASCE 1982-1983 season. The subject was: "Fundamental Concepts in the Movement of Groundwater Contaminants," and the Principal Speaker was **Dr. George F. Pinder**, Chairman, Dept. of Civil Engineering, RCA Professor of Energy Resources, Princeton University. President **Dr. Bernard M. McNamee**, presided over the first Section meeting of his tenure with his usual proficiency; and Past President **Dr. Robert M. Koerner**, was the adroit Program Host. Dr. Koerner substituted for **Dr. Ziyed I. Husami**, Chairman of the Section's Geotechnical Group, which arranged the meeting.

Widener and Spring Garden Night

The meeting honored the ASCE Student Chapters and Civil Engineering Departments of Widener University and Spring Garden College.

The C. E. Faculty of Widener was represented by Instructor **Ronald Mersky**, filling in for the recently appointed Faculty Advisor **Dr. Balaur Dhillon**, who was unable to attend the meeting. (Dr. Dhillon succeeds the late **Dr. George N. Bathish**, whose sudden death was reported in the October, 1982 issue of THE NEWS.)

Mr. Mersky described new and innovative curricula in Civil Engineering at the University, stressing the specialized degree in C. E. Previously at Widener the engineering course and degree was not departmentalized. The new policy includes the Master of Science Degree.

Student Chapter President **Jerry Dupuis** reviewed the busy schedule of activities and current plans of the Widener Chapter. Mr. Dupuis thanked the Phila. Section for its recognition and introduced students and alumni in attendance.

Spring Garden College Representatives

Prof. Philip Shapiro, Faculty Advisor of the Spring Garden College ASCE Student Club, presented a brief historical background of the famous institution. Founded in 1851, it is one of the oldest technical schools in the United States. The former Spring Garden Institute became chartered as a College in 1969, and now incorporates a highly regarded course in Civil Engineering Technology. The College also boasts a recently established curricula in IBM Computer Technology.

Prof. Shapiro introduced the Spring Garden College ASCE Student Club officers and members in attendance, including President **Kathy Stillings** and Vice President **Dan Bontempo**. President Stillings expressed her organization's appreciation of the Section's courtesies, and summarized the admirable technical and social activities of the Club. It is expected that the Club will soon attain the status of a full-fledged Student Chapter.

Past President Roll Honored

A special feature of the meeting was the presentation of a beautiful Past President's plaque to Section Past President **Dr. Frederic Roll** in recognition and appreciation of his outstanding performance during the 1981-1982 season. Past President **Joseph R. Synchronick** made the presentation.

Dr. Pinder Inaugurates Series

As the first speaker for the lecture series of the Geotechnical Group of the Philadelphia Section, Dr. G. F. Pinder gave the Section the fundamental concepts of contaminant transport in the subsurface flow system.

He established several questions on the topic and answered them. At first, he discussed the physical system of subsurface flow phenomena, detailed non-aqueous phase flow paths and aqueous flow paths in unsaturated and saturated zones and especially emphasized the flow directions and magnitude of vectors in multiple aquifer systems. He concluded that the flow directions and magnitude of vectors are not consistent in each aquifer and also they are changing with time. He introduced a technique for the calculation of velocity from the field data of groundwater levels (randomly distributed on the nodal points of triangular elements).

Secondly, he discussed the contaminant moving phenomena in ground water flow systems, i.e., moving by convection, dispersion, and retardation. The moving of the front of contaminant flow is accelerated by convection and dispersion terms but decelerated by retardation, mechanisms which are not yet clear.

He also emphasized the effects of a geologic discontinuity on the moving contaminants, contaminants moving to the supply well by pumping, vertical flow through a clay cap (lining), and the very high variability of concentration of contaminants with time, for example, the concentration increasing during the rainfall and seasonal changes.

Finally he discussed the roll of mathematical and numerical models; **groundwater flow models** have been most extensively used for such problems as regional

ASCE PRESIDENT-ELECT TO SPEAK AT DREXEL

Dr. Russell Stearns, ASCE National President-Elect, will appear at Drexel University, on **Monday, November 22, 1982 at 3:30 p.m.**, in Building 3, Room 3340. "Contrasting World of Transportation—American and Foreign Experience" will be the topic of Professor Stearns' lecture.

Dr. Stearns will also attend the evening meeting of the Transportation and Urban Development Group (See Technical Group Activities). Professor Stearns will give a short presentation prior to Mr. G. Craig Shelter, Acting Executive Director of the Philadelphia Planning Commission, who is the principal speaker.

aquifer studies, groundwater basin analysis and near-well performance. More recently **solute transport models** have been used to aid in understanding and predicting the effects of problems involving hazardous wastes. Some of the applications include: sea-water intrusion, underground storage of radioactive wastes, movement of leachate from sanitary landfills, groundwater contamination from holding ponds, and waste injection through deep wells. **Heat transport models** have been applied to problems concerning geothermal energy, heat storage in aquifers and thermal problems associated with high-level radioactive waste storage. **Deformation models** have been used to examine field problems where fluid withdrawal has decreased pressures and caused consolidation. This compaction of sediment results in subsidence at the land surface, and the filtering efficiency for many contaminants, e.g., TCE's.

Dr. Pinder's entire lecture was framed around case histories in which he was personally involved. Of great interest to the audience was information on nearby landfills such as those which threaten the Atlantic City water supply.

Spirited Question-Answer Period

Varied and controversial comments and questions from the audience on several issues in his address were graciously and dextrously responded to by our distinguished speaker, proving the authority Dr. Pinder has achieved in his field. In appreciation of his excellent talk, Dr. Koerner and Dr. McNamee presented Dr. Pinder the Section's Certificate of Appreciation and a complimentary copy of the Section's 1976 National ASCE Bicentennial Celebration Convention publication: "The History of Civil Engineering and Construction in the Delaware Valley."



Convention Update

The 1983 ASCE National Spring Convention
MAY 16 - 20, 1983
Franklin Plaza Hotel, Philadelphia

The Philadelphia Section, ASCE, will host next Spring's National ASCE Convention. The general technical program theme is: "Innovations in Civil Engineering," an exciting all-embracing concept which will incorporate symposia for five major topics, selected so that they do not fit directly into one narrow or single Technical Division of Committee of ASCE, but require the contribution of all units.

A well-organized Convention Committee under General Chairman **Leo O'Con-**

nor has been hard at work for almost a year planning programs, exhibits, activities, special functions, etc.

THE NEWS will keep the Membership of the Phila. Section informed of planning progress in its monthly publications.

START NOW TO TALK IT UP AMONG YOUR ASSOCIATES AND COLLEAGUES. BE SURE TO ARRANGE YOUR CALENDAR SO THAT YOU WILL ATTEND THIS GREAT COMING EVENT !!!

MEMBERS IN THE NEWS

Dr. Richard E. Woodring, Dean of the College of Engineering, Drexel University, was recently awarded the 1982 Reginald H. Jones Award from the National Action Council for Minorities in Engineering. Dean Woodring presented the \$10,000 cash grant, which accompanied the Award, to the Philadelphia Regional Introduction for Minorities in Engineering (PRIME), an organization he helped found.

Phila. Section Past President, **Alfred O. Quinn, P.E.**, who recently retired as President of Quinn and Associates, a firm specializing in photogrammetry, surveying and mapping, will be a Workshop Leader at a Seminar entitled, "Introduction to Photogrammetry", December 15-17, 1982, at Drexel University, as part of Drexel's Continuing Professional Education Program. Mr. Quinn, formerly Director of the Photogrammetry Engineering Division of the Aero Service Corp., has a broad range of professional experience in surveying and photogrammetric engineering projects throughout the world.

Klaus K. Fuelleborn, a Director of the Phila. Section, has been elected an Associate of Pennoni Associates, Inc., Consulting Engineers, Philadelphia.

Mark S. Moschella, graduate of Drexel University and first prize winner of the 1982 Pennsylvania-Delaware Student Chapter Conference Paper Competition, has recently joined the Bridge Section of McCormick, Taylor & Associates, Inc. of Philadelphia as a Structural Engi-

neer. Mr. Moschella's paper was entitled "Segmental Bridge Construction."

Dr. John L. Rumpf, currently Academic Vice President and Dean of the faculty, Temple University, has been appointed to the new position of Executive Vice President, the second highest ranking office of the University under a new management reorganization announced recently by the top administrators. Dr. Rumpf will be Acting President when Temple's new President, Peter J. Liacouras, is away from campus.

STORMWATER DETENTION SEMINAR

"Stormwater Detention" is the subject of a two-day professional development course to be held in Philadelphia, Pa., November 18 - 19, 1982. The course, which is intended for engineers and planners having a basic understanding of hydrology and hydraulics, will be presented by **Stormwater Consultants** — an engineering firm located in Bolingbrook, Illinois.

Attenuation of runoff flows by various detention storage methods is the seminar focus. Included are: detention facility sizing and location, inflow and outflow structure design, operation and maintenance, minimizing future problems, and optimizing facility effectiveness, structure life, and costs. Modern methods used to develop hydrographs and route flows through storage facilities are covered in workshop sessions. Professor of civil engineering at Virginia

The speakers will be **Herbert G. Poert-**

ner, President of Stormwater Consultants and **Chin Y. Kuo**, Associate Professor, Polytechnic Institute and State University.

The seminar/workshop will be held at the **Stadium Hilton Inn, 10th Street and Packer Avenue, Philadelphia, Pa.** (off I-76 near Veterans Stadium). Advance registration is required (fee \$198). For information and/or registration, contact Stormwater Consultants, 3 Westchester Court, Bolingbrook, Illinois 60439; (312) 739-3810.

DAVID M. SMALLWOOD

David M. Smallwood, a former Director and an Active Member of The Philadelphia Section, ASCE for several decades, died on September 25, 1982 at the age of 71.

Mr. Smallwood was the City of Philadelphia Commissioner of Streets from 1956 to 1970, under the administrations of Mayors Richardson Dilworth and James H. J. Tate. Well-known among his colleagues and associates as an able, sincere administrator, his decisions and opinions were direct and unequivocal. When he retired from his City post, he remarked: "I'm going south for a few weeks. That's something I haven't been able to do in winter for a long time. I won't have anything to do with potholes, rubbish or sewers." For several years Mr. Smallwood also worked as an Engineering Consultant for American Dredging Co.

Dave Smallwood was a Civil Engineering graduate of Drexel University, and was active in many Professional Societies in addition to ASCE. He was elected "Man of the Year" in 1968 by the American Public Works Association. An activist in the progressive work of numerous civic and religious organizations, Mr. Smallwood was an elder and a trustee of the Oxford United Presbyterian Church in Mount Airy, the community in which he lived for many years.

In ASCE, he was particularly interested in and participated in the affairs and programs of the National ASCE and the Philadelphia Section's Highways, Transportation and Urban Development Technical Division. He was Chairman of the Phila. Section Group for several terms.

Dave Smallwood is survived by his wife, Ruth — an active member of the Section's Women's Auxiliary; two sons, David and John; a daughter, Ruth; and three grandchildren.