

the news



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

Vol. 59 - 2

OUR 74th YEAR

November, 1986

NOVEMBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

TUESDAY, NOVEMBER 11, 1986

Engineers' Club, 1317 Spruce Street, Philadelphia

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

Joint Meeting with the Women's Auxiliary

SUBJECT: CIVIL ENGINEERING AND THE CHINESE CULTURE
SPEAKER: CELESTINO R. "CHUCK" PENNONI, P.E., Founder,
Chairman and President, Pennoni Associates, Inc.
Consulting Engineers, Philadelphia, PA.



Mr. Pennoni will show slides and describe his recent visit to China. The purpose of the visit was to lecture on Civil Engineering in several cities in Mainland China. The slides will show current construction in China, the Chinese culture, and a visit to some historic landmarks in China.

Chuck Pennoni holds B.S. and M.S. Degrees in Civil Engineering. He is a Registered Professional Engineer in ten states. Professional organizations in which he has

(Continued on page 2)

TECHNICAL GROUP ACTIVITIES Structural Group

November Meeting

Date: Thursday, November 20, 1986

Engineers' Club

Cocktails-5:30 PM; Dinner-6:30 PM;

Meeting-7:00 PM

Subject: Use of Precast Concrete for High-Rise Apartments

Speaker: Kenneth Baur, P.E.,
Chief Engineer, High
Concrete Structures, Inc.

The speaker will address the following

- topics:
- Alternate Framing Methods.
 - Column Size Based on Use of High-Strength Concrete.
 - Stability Method.
 - Erection Time.
 - Method of Fabrication.

For reservations and full information, please call Timothy H. Haahs, Chairman, Structural Group, Walker Parking Consultants, 2 Penn Center Plaza, Phila., PA 19102, (215) 751-9555.

Transportation and Urban Development Group

With many exciting Transportation projects just beginning and others underway, we look forward to an exciting year of discussing the problems facing Transportation Engineers in the Delaware Valley. No Transportation and Urban Development meeting is planned for the month of November. Any suggestion for the 1986-1987 Transportation and Urban Development Technical Group Program can be communicated to William T. Thomsen, P.E., Chairman, Urban Engineers, Inc., 300 North 3rd St., Phila., PA 19106 (215) 922-8080. (Continued page 2)

DECEMBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

TUESDAY, NOVEMBER 11, 1986

Engineers' Club, 1317 Spruce Street, Philadelphia

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

SUBJECT AND SPEAKER: TO BE ANNOUNCED

SPECIAL FEATURE: SWARTHMORE COLLEGE NIGHT
(Rescheduled from October, 1986)

Please call Mr. deKovacs at the Engineer's Club immediately (215 735-5234), for reservations. Dinner Meal Charge.

ASCE Member - \$12.00 Non-Member - \$13.00 Students - \$5.00

STUDENTS - Note that your Dinner Charge is LESS than one-half price. Plan to attend for Dinner or Meeting after Dinner.

NOVEMBER DINNER MEETING

(Continued from page 1)

held official positions include: Philadelphia Section, ASCE - President (1978-1979); National ASCE - Vice President, Zone 1 (1983-1985); Consulting Engineers Council of PA - President (1982-1983); The Engineers' Club of Philadelphia - President (1986); Drexel University Civil Engineering Dept. Advisory Committee - Chairman (1986); Pennsylvania State Board of Registration for Professional Engineers - Member.

Mr. Pennoni is the recipient of numerous Awards and Honors, including: PA Society of Professional Engineers (PSPE) - 1986 Engineer of the Year; Delaware Valley Engineer of the Year, 1985; National Society of Professional Engineers (NSPE) - Professional Development Award, 1984; PSPE Professional Development Award, 1983; New Jersey Society of Professional Engineers - Professional Development Award, 1982; Drexel University - Honor Man of the Year, 1973.

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, faculty and alumni are cordially invited to attend.

TECHNICAL GROUP ACTIVITIES

(Continued from page 1)

Water and Environmental Engineering Group

November Meeting

Date: Tuesday, November 18, 1986

Place: CAVANAUGH'S RESTAURANT, 3132 Market Street, Phila., PA

Cocktails and Dinner - 6:00 PM; Meeting - 7:00 PM

Subject: Waste Minimization

Speaker: Robert Schoenberger, PhD, P.E., Vice President,
Roy F. Weston, Inc., West Chester, PA

In view of the current activity concerning Superfund reauthorization and austere Federal and State budgets, this topic - concerning the process of control and management leading to hazardous waste reduction - is very timely.

This is the kickoff meeting for the 1986-1987 year. Please try to attend; and bring a friend or office associate. For reservations please call John Tunnell, Chairman, U.S. Army Corps of Engineers, U.S. Custom House, 2nd & Chestnut Sts., Phila., PA (215) 597-4714.

WOMEN'S AUXILIARY

October Meeting at Eleanor's

Convened within the cozy ambience of Eleanor Davis' Hatboro home, the Auxiliary's October 15, 1986 Luncheon-Meeting was, indeed as promised - "something really special!" To the delight of the good turnout of members, Eleanor and her gourmet-cook sister, Florence St. George - a resident of the Big Apple - prepared an elegant luncheon.

After a short business meeting, the homey atmosphere of the gathering was

further enhanced by the presentation of a very interesting sound-film entitled: "A Visit to Nepal." The commented color-slide show was authored, photographed, compiled and orated by Eleanor's next door neighbor, Mr. Raymond Fisher, who, with Mrs. Fisher, recently traveled through that picturesque Central Asian kingdom which lies between India and Tibet.

November Joint Meeting

The Phila. Section, ASCE Women's Auxiliary will host a Combined Luncheon-
(Continued on page 4)

IMPORTANT PARKING PRIVILEGE NOTICE

Philadelphia Section, ASCE members are entitled to special parking rates after 5:00 P.M. for meetings at the Engineers' Club, through an arrangement between the Club and the E-Z Parking Garage on the east side of Broad Street, North of Pine Street. Have your parking ticket validated at the front desk of the Engineers' Club and your parking fee will be the special reduced price of \$3.25.

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**COPY DEADLINE FOR
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NOVEMBER 11, 1986**

YOUNGER MEMBER FORUM ACTIVITIES

YME Kick-off

On Wednesday, September 10, 1986, the Phila. Section, ASCE Younger Member Forum opened its season with a field trip to the Philadelphia Water Department's SLUDGE COMPOSTING CENTER which is adjacent to the Southwest Water Pollution Control Plant. The Composting Center (Presently under construction) is one of the Water Department's largest projects, with a cost of over \$100 million and a site encompassing approximately 70 acres.

Thomas J. Lauer, the Assistant Resident Engineer representing the Water Department, hosted the tour and provided insight into the construction of the project. He also elaborated upon the techniques used by the designers and constructors, and the problems that developed. Tom is a Phila. Section Director and Chairman of the Student Chapters Committee.

Finnvola Quinn, an engineer with the Water Department's Sludge Management Unit, explained the principles behind the Composting Center, and discussed why a center of this nature was chosen.

JOB HUNTING

Raymond J. Clark, Senior Consultant of BERNARD HALDANE ASSOCIATES - CAREER CONSULTANTS, will discuss services offered by his company. B. Haldane Assoc. is one of the leading professional job placement firms in the Philadelphia area.

Date: Wednesday, November 12, 1986

Place: Engineers Club, 1317 Spruce, Street, Phila., PA

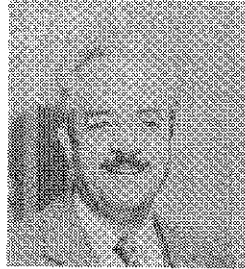
Time: 6:00 PM

This wine and cheese meeting is free to ASCE members and their friends. For more information contact Tony Micciolo, President of YMF, at 592-6088 between 8 am and 5 pm.

**INVITE YOUR
ASSOCIATES TO
ALL ASCE MEETINGS!**

JIM McPHILLIPS RETIRES FROM CITY POST

After 24 years as Chief Engineer and Surveyor for the Philadelphia Department of Streets, James W. McPhillips has



retired from government service and has accepted a position with Urban Engineers, Inc., a major diversified consulting firm head-

quartered in Philadelphia.

Mr. McPhillips, a Drexel University graduate, started with the Department of Streets as a Civil Engineer I in June 1953, working in its Bridge Design Section. He left the City after several years to join Albright and Friel, Consulting Engineers where he worked as a project engineer on a number of design projects including several major sections of I-95 in Northeast Philadelphia. In 1961, he was enticed back into government service and, in 1962 was appointed Chief Engineer and Surveyor.

As Chief Engineer and Surveyor, Jim has been responsible for the overall administration, planning, programming and execution of all engineering elements of the 2,700 mile highway and bridge system of the City of Philadelphia. He also served as a Commissioner of Fairmount Park and as President of the Board of Surveyors.

Jim McPhillips has been active in ASCE throughout his career. He has been a member of the Philadelphia Section for 33 years, where he progressed through the hierarchy to the Section's highest office of President in 1969-1970. He also has served on many Section Committees and special assignments. On the National ASCE level he has served on the Committee of Public Affairs (he was the first chairman of that prestigious group at its formation as part of the Activities Division of the Professional Activities Committee-PAC); Transportation Policy Committee; and Convention Policy and Practice Committee. He was General Chairman of the National ASCE Convention and Exposition hosted by the Phila. Section and held in Philadelphia in the

OCTOBER MEETING

October 14, 1986 Engineers' Club
By Dave Perri, Staff Writer

The Sinking Homes of Logan

More than 125 Phila. Section members and guests attended the inaugural regular monthly dinner meeting of the 1986-1987 season on October 14th.

Moustafa A. Gouda, Principal - Lippincott Associates and Chairman of the Section's Geotechnical Group, addressed the Joint General Membership/Geotechnical Group meeting of the Philadelphia Section, ASCE. Mr. Gouda's presentation focused on his firm's role in investigating the cause of the highly publicized house and infrastructure settlement problem in the Logan section of Philadelphia. Recommendations for remedial action developed from his investigation.

(Continued on page 4)

Bicentennial year 1976.

Mr. McPhillips was been honored with numerous individual awards, including the Scott B. Lilley Award, Streets Department Supervisor of the Year Award (1976) and the Government Civil Engineer of the Year Award (1983). During his tenure as Chief Engineer and Surveyor, the Department's Bridge Section has achieved nine design or prize bridge awards.

Jim and his lovely wife, Helene, have brought forth six splendid children, and boast four grandchildren. They live in the Torresdale Section in Northeast Philadelphia; and he is active on College Educational and Technology Advisory Boards, Parent-Teacher Associations and other important civic organizations.

The Philadelphia Section extends its best wishes to Jim McPhillips as he moves on to new pursuits. We are confident that he will continue to display the enthusiasm and talents which have earned him the respect of all who know and associate with him.

Jim will be honored by his friends and colleagues at a Retirement Dinner to be held on November 14, 1986, at the Canstatter Club in Northeast Philadelphia.

(Ed. Note: McPhillips was featured in the "Section Profiles" column of February, 1975 issue of THE NEWS.)

OCTOBER MEETING

(Continued from page 3)

Case History

The neighborhood affected is located in the north-central section of the City, in an area bounded by Roosevelt Blvd., 11th Marshall, and Loudon Streets. Mr. Gouda reported that over 970 rowhome properties spread over 17 city blocks are affected. Built in the 1920's on up to 40 feet of ash and cinder fill, many of the homes have recently been declared "imminently dangerous". Moustafa's slides dramatically illustrated the extent and severity of the differential settlement distressing the area. Leaning walls, crooked porches, distorted foundations and sunken driveways give the area the appearance of earthquake devastation. Mr. Gouda stated that inside some homes along the 800 block of Roosevelt Blvd., residents need to chock the wheels of baby carriages to prevent them from rolling downhill.

Investigation Undertaken

Earlier this year, the City contracted Lippincott Associates to assess the situation, determine the probable causes, and recommend remedial action(s). Moustafa Gouda described the firm's approach to evaluating the problem:

1. Evaluation of early control maps of area and house plans.
2. Site surveys, soil borings, and a series of full-scale plate load tests.
3. Extensive laboratory soil analysis including consolidation tests, grain size analysis and x-ray diffraction.

Report to City

Lippincott's findings were compiled in the form of a 600 page report presented to the City on August 21, 1986. Mr. Gouda proceeded to highlight the firm's conclusions:

1. The Logan homes are experiencing a "ground loss phenomenon". Water introduced through collapsed house sewer laterals, and disconnected gutters and downspouts, is eroding the highly dispersive ash and cinder fill under the homes.
2. Contrary to popular opinion, the Wingohocking Creek which

flows through a sewer lateral supported on mica schist bedrock is not affecting the area. Characteristics of a "stream effect" are not evident on the site.

3. The eroded fill is being transported from under the homes via a "soil piping" phenomenon and is being deposited into the City's combined sanitary/stormwater system.

Recommendations for Remedial Action

Moustafa supported his conclusions with extensive test data, slides of area maps and the findings of a TV camera survey of the sewer and house lateral systems. He estimated abatement costs at \$30,000 per house plus street and sewer improvements. Fortunately, explained Mr. Gouda, the worst distress is confined to specific areas which can be isolated. The audience listened intently as Moustafa detailed Lippincott's recommendations to the City:

1. Selective demolition of the most distressed properties.
2. Support remaining structures on 3/4" diameter pin piles spaced at 3/4' intervals.
3. Replace collapsed cast iron house laterals with flexible PVC pipe to eliminate one source of water infiltration.
4. Equip homes with new gutters and downspouts to channel water directly to the house laterals, thereby eliminating another source of infiltration and erosion.
5. Clean sewers to accept increased discharge from house laterals.
6. Control flooding in area by cleaning stormwater inlets.
7. Repair physical distress to remaining houses.

Questions and Answers

In a lively question and answer session following his presentation, Mr. Gouda responded candidly to the many comments and questions fired at him about his findings. Complicating the problem further, Mr. Gouda explained, the Logan

WOMEN'S AUXILIARY

(Continued from page 2)

Meeting of the Auxiliaries of ASCE, ASME and PSPE at the Engineers' Club on Wednesday, November 19, 1986, 12:00 noon. Featured will be a presentation on the subject: "Victorian Family Christmas", by Bonnie Dalzell and Jill Kohles. The narrative is a touching, intimate tale of a nostalgic era, which is enriched by authentic period decorating ideas.

Guests of all the participating Society Auxiliaries are cordially invited to attend. For reservations, please call Mary Ellen (Mrs. Warren R.) Van De Vort, (215)483-0714.

Wives of Phila. Section, ASCE members are urged to join the Women's Auxiliary, to attend all its meetings and functions and to bring guests. For full information about membership applications, please call Membership Committee Chairman Marie (Mrs. Kenneth J.) Zitomer, (215) 548-5324.

situation is fast becoming a complex social issue for the City. Some of the residents have lived in the neighborhood for over 50 years and would have the houses collapse around them rather than move out of the area. In addition, Moustafa stated that the Huntingdon Valley fault, located approximately 6 miles from Logan, may pose a seismic threat to the homes. The fault has recently become more active, with tremors reported in 1980 and 1982.

Mr. Gouda concluded his excellent presentation by crediting his colleagues at Lippincott Associates for their dedication to the project. He also acknowledged the input of engineers from several City of Philadelphia operating departments. In addition, Moustafa thanked his secretarial staff for their tireless support.

Thanks to Moustafa Gouda's outstanding efforts, the 1986-1987 dinner meeting schedule is off to a dynamic start. He was warmly congratulated by President Albert M. Tantara, in his laudatory debut as presiding officer at the Section's first meeting of the season.