

the news



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PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

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Vol. 72-3

Our 86th Year

December, 1999 – January, 2000

PLEASE NOTE NEW ELECTRONIC MESSAGE HOTLINE ABOVE

DECEMBER LUNCHEON & TOUR

Philadelphia Section, American Society of Civil Engineers

THURSDAY, DECEMBER 16, 1999

Luncheon and Tour of the Fairmount Water Works

TOUR GUIDE: Ed Grusheski, General Manager, Public Affairs Division, Philadelphia Water Department

RESERVATIONS ARE NECESSARY AS SOON AS POSSIBLE. A limited number of attendees can be accommodated. **When you make your reservations, the meeting time and place will be provided to you.**

Luncheon at Lloyd Hall – the newest addition to Boathouse Row on Kelly Drive. Cost of Luncheon: \$10.00. No charge for the Tour. Mail check payable to the Phila. Section, ASCE, P.O. Box 58186, Phila., PA 19102-8186; or call the Electronic Message Center: **1-800-461-4190** (Open 24 hours/day).

Nineteen ninety-nine marks the 25th Anniversary of efforts to restore Philadelphia's landmark historic site, the Fairmount Water Works. This effort has picked up great momentum in the last few years, not just because of a good economy, but primarily because the health of the Schuylkill River has changed dramatically for the better in this last decade. The remarkable comeback of America's
(Continued on Page 2)

JANUARY JOINT DINNER MEETING

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

WEDNESDAY, JANUARY 12, 2000

HOLIDAY INN • King of Prussia, PA • See Location Map on Page 2
Cocktails – 6:00 p.m. • Dinner – 7:00 p.m. • Meeting – 8:00 p.m.

SUBJECT: "Grace Under Fire"

SPEAKER: Janet S. Sanders, Ph.D., Vice President, Business Planning & Marketing, Sverdrup Civil, Inc., a Jacobs Company, Maryland Heights, Missouri

SPECIAL FEATURE: DREXEL UNIVERSITY NIGHT

The ASCE Student Chapter, Alumni and Faculty of the Civil and Architectural Engineering Department of Drexel University will be honored at this meeting. All Students, Faculty and Alumni are cordially invited.

RESERVATIONS MUST BE SUBMITTED AS SOON AS POSSIBLE. Please send your check for the number of attendees @ \$19 per member or guest; \$10 ASCE Student Members, payable to the Phila. Section, ASCE, P.O. Box 58186, Phila., PA 19102-8186; or call the Electronic Message Center: **1-800-461-4190** (Open 24 hours/day).

You're at a public hearing, and the questions come like machine-gun fire. You present your draft budget and your boss starts cross-examining you. A reporter wants a 15-second sound bite in response to a tough question on a complex issue.
(Continued on Page 2)

TECHNICAL GROUP ACTIVITIES

Engineering Management Group

The Engineering Management Technical Group is dedicated to informing Philadelphia Section ASCE members of the latest developments in engineering, construction and management. We have sponsored Luncheon Meetings on such diverse topics as the Deconstruction of the Meridian Building, Development of Penn's Landing, Continuing Professional Development and The Internet. If you are interested in sharing your ideas on potential topics and speakers, call **Dennis MacBride, P.E.**, Chairman, Engineering Management Group at **(215) 580-7084**.

Delaware Valley Geo-Institute Group (DVGI)

December Meeting

December 15, 1999, Social Hour 6:15 pm; Dinner 7:15 pm; Presentation 8:00 pm
Location: Philadelphia Airport Hilton
SUBJECT: Geo Synthetics in Highway Design and Construction
SPEAKER: Imad Al-Qadi, PhD, P.E.
Cost for dinner: \$26.00

Professor Al-Qadi is the principal researcher of VA Tech's geosynthetically-stabilized flexible pavement laboratory and field research. Professor Al-Qadi is an Associate Professor and Coordinator of the Materials Program in the Civil Engineering Department at Virginia Tech. He received his MS and PhD from Penn State. Professor Al-Qadi's research has been published in more than 100 referred journals, conference papers and reports. Part of his research has been incorporated in AASHTO, ASTM and FHWA demonstration projects. In addition, he has received several awards including the 1994 NSF Young Investigator Award and was the Virginia Tech nominee for the 1996 NSF Presidential Faculty Fellow Award. He is listed in several Who's Who publications and has been named to the Dean's List of Excellence in Teaching four times. He serves on more than 17 technical committees in ASCE, TRB and ASTM, technical advisory boards and as propos-
(Continued on Page 2)

December Luncheon & Tour

(Continued from Page 1)

ivers, is only one of the stories the Fairmount Water Works Interpretive Center tells, through its lively educational programs and interactive exhibits, to thousands of visitors each year.

Ed Grusheski will outline the history of (drinking) water and waste water in Philadelphia with a specific focus on the environmental issues which informed, or were ignored by, the decision-makers who built the city's water infrastructure, the urban watershed. A particular emphasis will be placed on the role of the Fairmount Water Works in the nineteenth century, as Philadelphia made a valiant attempt to implement land management practices to protect its drinking water quality.

There will be a special presentation, of "Waterworks in Art."

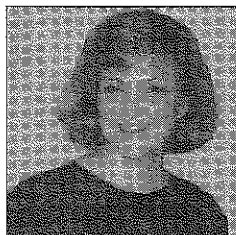
Ed Grusheski was appointed General Manager of the Public Affairs Division of the Philadelphia Water Department in May, 1999. He holds a Bachelor of Science in Foreign Service from Georgetown University and an M.A. in American Civilization from the University of Pennsylvania. Mr. Grusheski joined the Water Department in 1988 as Director of the Fairmount Water Works Interpretive Center, an educational facility and museum run by the Public Affairs Division.

January Joint Dinner Meeting

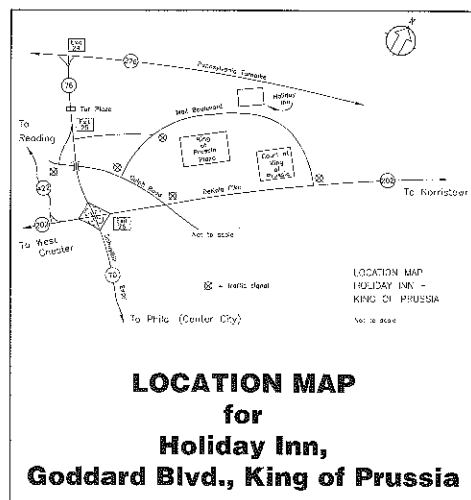
(Continued from Page 1)

It can be difficult to gather your thoughts, create a focused message and deliver it clearly and concisely off the top of your head. Communication "grace under fire" is a career survival skill. Dr. Sanders will show us how to identify a good idea, focus a good message and present a brief but coherent answer — with 3 seconds preparation. You'll learn a message structure that will give you confidence when you have to respond to tough, spontaneous questions in impromptu settings.

Dr. Janet S. Sanders has nearly 30 years of research, teaching and consulting experience in the communication field. Her B.A. and M.A. degrees are from the University of Maryland and her PhD in Speech Communication and Human Relations is from the University of Kansas. Dr. Sanders has authored numerous journal articles and other publications, including the chapter "Winning Presentations" in the 1994 book "Handbook for Marketing Professional Services" which is being updated for the 1999 edition.



As founder of the Clayton Consulting Group, a Management Consulting firm that works with corporations and institutions to enhance individual and organizational communication, Dr. Sanders has consulted with over 40 A/E firms nationwide, as well as other corporations on business development and/or competitive presentations for contracts totaling over \$28 billion, and her "win rate" tops 70%. In 1993, she became VP-Business Planning and Marketing for Sverdrup Civil Inc., one of the nation's largest engineering firms. She was named to Sverdrup Civil Inc.'s Board of Directors in 1995. The company recently merged with Jacobs Engineering Corp., and the new organization - number 3 on ENR's Top 500 Design Firms list - has annual revenue of approximately \$3 billion.



Technical Group Activities

(Continued from Page 1)

als review panelist. He also organized and chaired several technical sessions and conferences. Dr. Al-Qadi is a licensed Professional Engineer in the states of Virginia and Pennsylvania and has served as a consultant for several organizations. His presentation will be of interest to those interested in highway geotechnology, embankment design, pavements, environmental effects on soil behavior, and Geotechnical Engineering.

Contact **Mike Byle** by telephone (610) 650-8101 or fax (610) 650-8190. Send check payable to Michael Byle, Gannett Fleming Inc., PO Box 80794, Valley Forge, PA 19484-0794 as soon as possible to confirm reservation.

October Meeting Review

The first meeting of the Delaware Valley GeoInstitute was held October 12, 1999 at the King of Prussia Holiday Inn. The meeting was attended by 32 Geo-Professionals including engineering consultants, educational faculty, Geotechnical Contractors and Engineering Geolo-

gists. Group Chairman **Mike Byle** welcomed everyone and updated them on the status of the GeoInstitute and the DVGI. The main speaker was **John Meyers** who presented a summary of *Geotechnical Investigations and Design for Sinkhole Mitigation for US 202 Section 400*. Portions of the project are currently under construction while others are still in final design. In a well-received presentation, John described the exploration methods, which included both conventional borings and several types of geophysical exploration. All in attendance agreed that the meeting was a valuable opportunity to keep up-to-date and socialize with fellow Geo-Professionals.

(Continued on Page 3)

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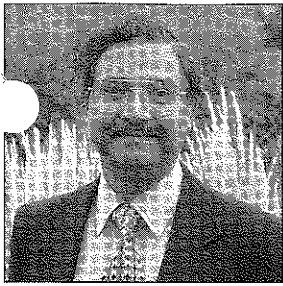
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FEBRUARY 2000 ISSUE
JANUARY 12, 2000**



THE PRESIDENT'S MESSAGE

It was a sight to gladden the heart of any Officer of the Phila. Section, ASCE. There were more than a hundred reasons for it. One hundred and eight to be exact. Yes, we had 108 persons at the October 21, 1999 Dinner/Talk Meeting of the Section. Maybe it was the topic, the location of the proposed stadium, or the presence of Phillies centerfielder, **Doug Glanville**, also a Civil Engineer by education, or maybe it was the hard work of the Directors of the Section, at publicizing the event and their powers of persuasion. Whatever the cause or reason, it was a welcome sight. I hope that, you, our members, will continue to attend in such

numbers in the future! Such a response gives us, the Directors of the Section, an incentive to work harder. Furthermore, such positive feedback is essential to the well being of the Section, which is run wholly by the volunteer effort.

Speaking about volunteer effort, I must mention here, **Jim Gabriel** of the Philadelphia Streets Department, who put in a lot of effort on the Mural project, but whose name was inadvertently left out of the credits at the dedication ceremony.

As mentioned in my last Message, we are continuing to work on the brochure project, albeit at a very slow pace, which highlights the Civil Engineering Landmarks of the Delaware Valley region. We need your input to help make it a success. The target date for the production of this brochure is toward the end of 2001 so that the distribution can begin the following year to coincide with the 150th anniversary celebrations. We are also soliciting volunteers to work on the Educational Outreach Project. You can help us by agreeing to spend some time at your neighborhood elementary, middle or high school, explaining what you do as a Civil Engineer and how Civil Engineers are helping to build a better world. We have some educational materials for distribution and videos we can lend you. The latter, a very recent production focusing on Civil Engineering as a career, is more suitable for use in 8th or higher grades. Your efforts will go a long way toward disseminating information about the profession, and help in attracting the younger generation to it. Unless you have visited a school, you will be quite surprised to find out how little first-hand information about Civil Engineering is available to the school-going population.

Let us all work together to inform the younger generation and the public of the Civil Engineering challenges of the past, present and future, and demonstrate how we try to achieve the goal of ASCE's vision statement, simple but succinct: *Engineers Building a Better Quality of Life*. Our success in this endeavor will determine if Civil Engineering will remain as attractive a profession in the first century of the new millennium as it was in the final century of the current one.

Sincerely, Faruq M.A. Siddiqui, Ph.D.
President, Phila. Section, ASCE

Technical Group Activities

(Continued from Page 2)

Transportation Group

The Phila. Section, ASCE Transportation Group at this time is planning three Luncheon Meetings for early next year. Our schedule for the 1999-2000 season is as follows:

January Luncheon Meeting

DATE: Thursday, January 20, 2000

Buffet Luncheon: 12 Noon, Presentation: 12:30 pm
COST: \$10.00

LOCATION: Conference Room "Y", 16th Floor, Municipal Services Building, 15th & JFK Blvd., Philadelphia

SUBJECT: Overview of the Northeast Philadelphia Transit Study

SPEAKERS: David Miller, Project Manager, Parsons, Brinckerhoff, Quade and Douglas, Inc., and Andrew Lenton, Transportation Planner, Philadelphia City Planning Commission

This study for transportation improvements in the Northeast includes extensions to both SEPTA's Broad Street Subway and SEPTA's Frankford Elevated among other improvements.

Reservations are required for the January 20th meeting with seating limited to 50. Please contact either **Chris L. Rood, P.E.**, Transportation Group Chairman at (215) 580-7586 or **Steve Buckley**, Younger Member Forum contact at

(215) 790-2310 for reservations and if you have any questions.

February 2000

Joint Meeting with the Construction Group with the topic being the **Walt Whitman Bridge Rehabilitation Project**.

March/April 2000

SEPTA's Schuylkill Metro Update

Look for future issues of THE NEWS for confirmed dates and times for the February and March/April meetings.

Also, if anyone is interested in participating in the Transportation Group's planning for upcoming meetings and events, please contact **Chris L. Rood, P.E.**, at (215) 580-7586.

The Beginnings of the Delaware Valley Geo-Institute

The Delaware Valley Geo-Institute (DVGI) is a direct result of ASCE restructuring its Technical Divisions into "Institutes." The formation of Institutes was seen as a means for consolidating expertise in internationally recognized organizations that could more specifically address the needs of the technical community than the old Technical Divisions could. The Geo-Institute was structured to permit membership by non-Civil Engineers who are involved in Geotechnical, Geologic, and

YOUNGER MEMBER FORUM NEWS

by Christopher Menna, President & Forum Editor

The Younger Member Forum (YMF) current membership includes college students, recent graduates, and young Registered Professional Engineers who are 35 years of age and under. The objectives of this group are: 1) To provide networking opportunities, 2) To interact with schools and the general public to promote Civil Engineering, and 3) To enhance career development.

Young engineers or college students who would like to become part of the YMF please contact **Chris Barber**, Armand Corporation at (609) 348-9430.

Past Accomplishments

On Wednesday, October 27, 1999 the YMF held its first meeting of the year. This well attended event took place on the 16th floor of the Municipal Services Building in Center City Philadelphia. Pizza and soda were provided to everyone. Our featured speaker was **Dr. William Deutsch**, Senior Consultant at Roy F. Weston, Inc. and Professor at Drexel University. His topic was *The Philadelphia International Airport Runway Extension*. Specifically, he focused on the geotechnical aspects of this complicated project. Special thanks to **Steve Steinbrook** and **Jen Diec** for making the meeting arrangements.

Upcoming Events

The YMF tentatively plans to host its Third Annual Winter Social in Mid-December, 1999. This usually well attended event will be an excellent opportunity to mingle and network with YMF members, Section members, and Section Board members. YMF members and college students are strongly encouraged to attend. Watch THE NEWS and YMF faxes for more upcoming information.

Member Spotlight

The purpose of the member spotlight is to introduce a fellow YMF member to the Delaware Valley Engineering Community.

Steve Steinbrook, E.I.T. is an Assistant Design Engineer employed by Roy F. Weston, Inc. in West Chester. Specifically, he works in the Concept Engineering and GeoCivil Water Resources Departments. Previously, Steve worked first as a Drexel University Co-op Student, then as an Assistant Engineer for CH2M Hill in Center City Philadelphia. In addition, Steve is halfway through his Masters Degree of Civil Engineering at Drexel University. Steve just recently joined the YMF. He is a fine example of an active member. In fact, in no time at all, he has become one of our Officers and he has helped to plan a meeting. We are very pleased to have Steve as one of our up-and-coming members.

other Geo-Sciences, who would not normally join an organization such as ASCE, but who are directly involved in practices with interests in common with Geotechnical Engineers.

The Geotechnical Division of ASCE began operating as the Geo-Institute in 1998. Upon its inception, the membership saw a need for a pres-

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OCTOBER DINNER MEETING

October 21, 1999

Williamson's City Line, Phila., PA

"Flyin' High at the Airport"

By Bob Wright, Staff Writer

The Philadelphia Section, ASCE inaugurated its 1999-2000 season with a gratifying turnout of members, guests and students and faculty of the Drexel University ASCE Student Chapter, at the October 21, 1999 meeting, ably co-chaired by Section President **Dr. Faruq Siddiqui** and President-Elect **Thomas Branigan**. The always timely and interesting topic discussed was "The Philadelphia International Airport – Flyin' High." Principal speaker was **Alfred (Fred) Testa, Jr.**, Accredited Airport Executive (AAE), Director of Philadelphia International and Northeast Philadelphia Airports since April 5, 1999.

Drexel University Night

The meeting honored the ASCE Student Chapter, Alumni and Faculty of the Civil and Architectural Engineering Department of Drexel University.

Dr. Martin Reviews Drexel's C.E. Agenda

Dr. Joseph P. Martin, head of the Department of Civil and Architectural Engineering, and Faculty Advisor of Drexel's ASCE Student Chapter, thanked his hosts for their courtesies. He paid special tribute to the Adjunct Professors, Teaching Assistants, and the Board of Trustees for their active roles in cementing close ties between Drexel and the Civil Engineering Community as a whole. He reviewed the ambitious curricula current at the Department, and those in planning stages for the future.

Student Chapter President Speaks

Drexel ASCE Student Chapter President **Alyssa Koch** also thanked the Section for its tributes, and introduced her fellow Officers and Faculty members in attendance: Vice President, **Brad Springe**; Secretary, **Denise Welsh**; Treasurer, **Tom Halliwell**; and Faculty members **Dr. Harry Harris** and **Dr. Jonathan Cheng**, who succeeds Dr. Martin as Student Chapter Faculty Advisor. Miss Koch described the Chapter's involvement in Philadelphia projects, as well as those of other cities relevant to their initiatives. The Chapter invites well-known and respected authorities on subjects of interest to Civil Engineering students to speak at its regular meetings; and it participates enthusiastically in the Annual Concrete Canoe Race and Model Steel Bridge Design Competitions; combined with a very busy and varied program of activities both technical and communal.

Zion Presents Mr. Testa

Section Past President **Al Zion**, who is intimately involved in the Airport's vast expansion and improvement program, introduced the meeting's featured speaker, **Alfred (Fred) Testa**, Director of Aviation for the City of Philadelphia's Commerce Department. He was brought to Philadelphia in April of this year after serving in a similar position at the Manchester (New Hampshire) airport.

Mr. Testa noted that he was born and raised in Rhode Island and started out his college career as

a Civil Engineering major, although he did not continue to receive his degree in this field. He is trained as a lawyer but has been working in the aviation field for many years.

Prior to coming to Philadelphia, Mr. Testa noted that he always thought that Philadelphia International Airport (PIA) was among the worst he had ever seen and generally arranged his travel plans to avoid it whenever possible. This has changed in the past few years with the many improvements already in place, and with several more coming. The airport is still subject to major delays, and much of this is related to US Airways' operation of a "hub" at Philadelphia (where the airline earns over a third of its corporate profit). As a hub, PIA serves many passengers who are merely transferring from one flight to another, and about 30 percent of the total passenger volume at PIA represents transfer traffic. This is low for a typical hub facility, where this figure is usually about eighty percent.

The Status of the Airport Analyzed

Mr. Testa noted that PIA was poorly designed, given the available site, and this severely limits the airport's long-range plans. He compared the size of PIA's site at 2400 acres with the airports at Jacksonville (16,000 acres) and Denver (52 square miles). He added that this could be blamed on an architect, not an engineer, since an architect was hired several years ago to design the existing terminal complex. In terms of number of flights, PIA is the busiest airport on the East Coast between Boston and Atlanta, with over 1400 take-offs and landings daily (despite being designed for 800). Passenger-volume-wise, it is the nineteenth busiest airport in the United States.

Problems and Constraints

Mr. Testa indicated several existing problems and constraints illustrated on aerial photos of the airport. The existing terminal piers, which extend onto the site to facilitate the loading and unloading of planes, are too close together to allow planes to move efficiently. The pedestrian concourses are too narrow for the volume of users. While the terminals are located close to I-95, it would be more ideal to have them on the riverside of the site. The John Heinz National Wildlife Refuge north of I-95 nearly prohibits any expansion of the airport in that direction.

Proposed Solutions

He proposed some solutions to these problems, which will be part of a new master plan for PIA. One short-term solution is the construction of a new terminal for regional air service (Terminal F). This will be located at the northern end of the complex. This \$90 million terminal will allow passengers directly to board and disembark at a terminal gate, in place of the current shuttle bus ride to a plane, which is undesirable in bad weather. The terminal will also feature baggage claim in the same building as ticketing, only the

second such arrangement at an airport in this country. The new terminal should open to serve the approximately 200 regional flights per day at PIA by December 2000.

A new international terminal with 6 gates . . . wide-body jets (Terminal 1) will be built at the south end of the terminal complex, near Terminal A, the current site of international operations. This \$400 million undertaking will require part of the building to extend over the service roadways due to site constraints. Construction has begun, with an expected completion in spring 2001. The new terminal will also require the revision of the I-95 Airport interchange, which will be performed separately at a cost of \$70 million.

Long-Range Plans and Hopes

Mr. Testa reported on a new runway which will open in December. It is 5000 feet in length and was designed for turboprop aircraft. Unfortunately, most regional service has been changed to smaller regional jets which cannot use the new facility. Thus, this \$220 million runway will not be able to be used to its optimal extent to reduce demand on the main runways. On the long-range horizon, Mr. Testa would like to redesign the entire airport.

Of the three current runways (not including the new one previously mentioned), only the two east-west runways can be used by jets. The north-south runway is very short and can only serve small propeller planes. Of the 68 gates now available, he foresees an increase to 140 as an ultimate need. He is commissioning his staff and consultants to review the long-term requirements of the region for air travel and the feasibility and affordability of these needs, which he expects to be finalized over the next eighteen months. This could be as large as a \$2.5-3 billion program.

Among Mr. Testa's preferences for a revamped PIA are a relocation of the entire terminal to the Delaware River side of the site. This would ultimately allow access by watercraft. All terminals would be midfield with an internal circulation system, perhaps light rail. Of course, all this must be done while existing traffic, terminals and operations are maintained, which could prove very difficult and tricky. While most people believe that the work could be performed mainly at night, when passenger operations cease, UPS has many flights during this period, and PIA is its biggest air hub in the world.

Environmental and Economic Considerations

Mr. Testa noted that there are many environmental concerns with airport operation. EPA is starting to look at jet exhaust, and idling planes produce large quantities of pollutant. The current expansion has required numerous permits from government agencies and several protective measures are being taken for certain animal species such as the red-belly turtle. Noise mitigation remains a major problem which must be handled. The airport has a significant economic impact on the region. Approximately twenty thousand employees work in various capacities at PIA, and this results in \$6 billion annually in the region's

(Continued on Page 7)

NOVEMBER DINNER MEETING

November 11, 1999

Williamson's City Line, Phila., PA

"The Phillies and the Stadium"

By Bob Wright, Staff Writer

A great crowd of Philadelphia Section, ASCE members, guests, student members, Alumni and Faculty of the University of Pennsylvania ASCE Student Chapter, enjoyed a stimulating discussion of numerous aspects of the very current subject widely considered by the Philadelphia officials and the public in general: "Should Philadelphia Build a Center City Baseball Stadium?"

Two notable individuals offered insights into the location situation, one from the transportation and access standpoint; the other from the unique perspective of a Phillies player, who is also a graduate Civil Engineer. The former is **Vukan Vuchic, Ph.D.**, UPS Foundation Professor of Transportation, Department of Systems Engineering, University of Pennsylvania. The baseball player is the famous star centerfielder of the Phillies, **Doug Glanville**, who received his B.S. in Transportation Systems Engineering from the University of Pennsylvania in 1992.

University of Pennsylvania Night

The meeting honored the ASCE Student Chapter, Alumni and Faculty of the Civil Engineering/Systems Department of the University of Pennsylvania. Penn's ASCE Student Chapter President **Mark Sand** thanked the Phila. Section for its courtesies and introduced his fellow officers: Vice President, **Mike McGuire**; Treasurer, **Josh Hammel**; Secretary, **Krista Pohl**. He also asked the Student Chapter Faculty Advisor, **Dr. Wen K. Shieh**, and other Civil Engineering Faculty in attendance to take bows. They are: **Dr. Vukan Vuchic** (one of the evening's principal speakers), **Dr. John Lepore** and **Dr. Fred Roll** (Retired); as well as Alumni at the meeting.

Mark explained how the Chapter focuses on student involvement in ASCE, increasing awareness of civil engineering's great potential on and off campus, serving internships in industry and consulting firms; field trips, two-way lecture discussions at its regular meetings; and community involvement round out the Chapter's busy, active agenda.

Bob Wright Introduces Speakers' Panel

Section Past President (1993-1994) **Bob Wright** introduced the panel of speakers: **Dr. Vukan Vuchic**, UPS Professor of Transportation Systems Engineering, University of Pennsylvania; **Doug Glanville**, Center Fielder, Philadelphia Phillies baseball team; **Tony D'Emidio** and **Josh Kohn**, Transportation Systems Engineering students, University of Pennsylvania.

Speakers' Prior Research Explored

Dr. Vuchic gave some insights on the various aspects of the panel members, noting that Glanville had completed a paper on the transportation impacts on a 30th Street-area stadium during his undergraduate days at Penn, and the D'Emidio/Kohn team had recently re-explored the possibilities of this site. Glanville referenced an editorial

he co-authored with Vuchic on the 30th Street site which had appeared in the Philadelphia Inquirer. He offered some perspectives on the success of downtown "retro" baseball stadiums recently completed in other cities. In his opinion, the success is directly related to the level of fan support of a team, since fans must come out and attend games. To facilitate this, access becomes a significant issue. He recalled studies performed prior to the construction of Veterans Stadium which he researched while preparing his paper in 1992. These studies considered over 15 sites originally, narrowing the field to about five before making the final site selection. In today's economy, he wondered how feasible this approach would be. Additionally, political influences have become more acute.

Glanville on Comparative Site Selection Analyses

Glanville compared the site selection to the experiences of the Hubble telescope, where one seemingly minuscule error had a major impact. The combination of his baseball experience and engineering training has given him a different view of stadiums, especially in the areas of access and traffic management. He noted that Baltimore's Camden Yards appeared to handle access well, specifically in its closeness to light rail and commuter rail transit. In Chicago, where he played for a short time, the location of Wrigley Field was equally transit-enhanced, as it is in the middle of a thriving neighborhood not very close to downtown.

It was Glanville's opinion that cost was perhaps a significant factor which would hurt the 30th Street site. This alone would prevent most cities from considering such a site, but the proximity of public transit might help enhance the desirability of this site (as has been proven in other cities), cost notwithstanding.

Assessment of 30th Street Location

A detailed assessment of the possible locations in the 30th Street area was presented by the D'Emidio/Kohn team. They observed that the downtown stadium had a major economic impact on the area, especially with non-event-specific activities such as restaurants. There were also political considerations. However, their belief was that the ease of access and egress from the stadium will ultimately determine whether fans will both attend the games and return for future games. In their comparison to Camden Yards, a stadium which remains enormously popular with fans after 7 years of use, the key factors they cited for this included the good highway access, available parking (mainly off-site), and convenient rail transit. Roughly 14 percent of fans come by light rail alone.

Vuchic on Access and Transportation

Dr. Vuchic built on the theme of access and transportation as major factors that must be con-

sidered in the siting of a ballpark. If the venue is downtown, congestion becomes a very critical concern. Ease of access can have a direct effect on event attendance. The provision of parking at a downtown stadium will be expensive given the high value of land. Drivers tend to come for the event and leave when it is over, thus the economic "cascade" effect on local businesses is non-existent. In Washington, DC, the new football stadium was constructed in a suburban area close to interstate highways. On event days, the area becomes paralyzed with congested traffic. There is no transit option for attendees. By contrast, the new basketball/hockey arena, right in the middle of downtown, attracts nearly 70 percent of its attendance by transit. The transit users tend to arrive before and/or remain after the events, and they spend money in shops, restaurants, etc.

Effects of Spring Garden Location

Dr. Vuchic noted that the proposed Broad/Spring Garden stadium would adversely affect nearby residential areas. The residents of these neighborhoods have effectively protested against the stadium. They have argued that, despite the transit access provided by the Broad Street Subway, many fans would drive and attempt to park on the residential streets to avoid parking fees at downtown garages. Studies performed for the Phillies indicated that nearly 12,000 cars would be expected on event days, with over 80 percent of the attendance using private cars. The 30th Street site, with no residential areas nearby, would not have these difficulties. The large unused area could offer much unrestricted potential. The University of Pennsylvania has vocally opposed this site, but it has been acceptable to other neighboring institutions.

Access and Egress Analyses

D'Emidio and Kohn presented a brief analysis of access and egress routes to two possible sites in the 30th Street area. One would be south of Walnut Street, the other above the Amtrak tracks on the north side of the 30th Street Station complex. While each of these offers significant engineering challenges and would require major investments in infrastructure, they could work. With planned relocation of many activities of the main Post Office complex, garages and other sites could be made available for parking and other reuse. The existence of the lower level roadways south of Market Street could be an advantage in the southern site, as traffic could be removed from the major east-west streets immediately adjacent to the proposed stadium. With the "hub" of transit at 30th Street Station, transit access to either site is excellent, and at least 50 percent of attendees could be expected to arrive by train, subway or trolley. SEPTA could initiate some fare incentives to enhance transit use, and several operational improvements could be made to assure fans that homeward-bound trains would wait for them if games ran into extra innings. There are many opportunities for businesses such as shops and restaurants to take advantage of the site and provide more positive economic impact possibilities for the new stadium.

(Continued on Page 7)

READING BRANCH WINS AWARD

The Reading Branch of the Philadelphia Section, ASCE was recognized at the annual conference in Charlotte, NC, for its success in boosting membership.

The Branch received a check for \$250 and a suitably inscribed podium banner. Congrats to our colleagues in Reading!

VILLANOVA HEC-RAS SHORT COURSE

Villanova University Department of Civil and Environmental Engineering and the Center for Environmental Engineering Research announce that the short course "Analysis of Water Surface Profiles Using HEC-RAS" will be held **January 5-7, 2000**. This course has been designed to familiarize the Civil and Environmental Engineer with both the theoretical and practical aspects of using HEC-RAS, the steady flow, water surface profile computer model developed by the Hydrologic Engineering Center of the U.S. Army Corps of Engineers. HEC-RAS is the first of the Next Generation (NexGen) engineering software packages to be released by the Corps. HEC-RAS replaces HEC-2 as the industry standard. Each instructor has more than a decade of extensive consulting, research, and academic experience with hydraulic models. Villanova participated as a Beta test site for the original HEC-RAS software. **Professors Traver, Chadderton and Falcone** are the chief instructors.

The fee for the conference which include class materials, program software and user manuals, coffee breaks, and a reception is \$750. Each course participant will receive the latest HEC-RAS software, a copy of the program documentation, and course lecture notes. The program software is not copy protected. 2.0 CEU's will be awarded to each student. A \$50 discount is offered to members of ASCE, SAME. Group discounts are available. The Phila. Section, ASCE is a co-sponsor of the course.

The course starts with a review of Basic Open Channel Hydraulics. After each new aspect of HEC-RAS is introduced, students will be given a design problem to analyze on the computer under supervision of the course instructors. Students will use the most current micro-computer version of the package on pentium microcomputers in Villanova's Computer Aided classroom. This facility allows the instructors to include actual HEC-RAS results in a real-time environment. HEC-RAS is windows-based and much more user friendly than the earlier HEC-2. Specialized topics to be discussed include Cross Section Selection, Mixed Flow Regime Modeling, Bridge and Culvert Hydraulics, Floodway Determination, Error Analysis and Model Sensitivity. Theory and practical usage will be integrated to maximize understanding of HEC-RAS applications to real world design problems.

For further information, or to reserve a seat contact either Professors Traver or Falcone at

Beginning of the DVGI

(Continued from Page 3)

ence at the local level. The national GI organization blossomed with National and International activities almost immediately. At the first National Conference of the GI at Logan, Utah in 1998, the first meeting of the Sections and Branches Committee was held. **Mike Byle** became a member of the Sections and Branches Committee and through coordination with **Dr. Joseph Martin** has represented the Geotechnical Group of the Philadelphia Section at National Geo-Institute meetings. The Sections and Branches Committee (SBC) immediately began exploring ways to realize a local organization. In creating a local presence, the GI did not want to compete with or take local Geotechnical involvement away from the Sections. To this end, the SBC coordinated with ASCE National which revised its bylaws to permit Institute-Only (IO) members to be active within Local Sections and branches of ASCE. The remaining task is to amend Local Section and Branch bylaws to incorporate the institutes and IO members as permitted by the ASCE National bylaws.

The next step was to develop a draft agreement between the GI and local ASCE Sections to amend Section bylaws to permit IO members to be admitted. This agreement is in review by the Philadelphia Section of ASCE. The agreement includes the following provisions:

1. The Philadelphia Section will amend its bylaws to permit IO members to be active within the Section Technical Groups.
2. The Geotechnical Group (now DVGI) will draft bylaws consistent with Section bylaws.
3. The DVGI and Philadelphia Section will come to agreement on the funding and other arrangements necessary for this to occur (i.e. Local dues for IO members, IO member involvement in other non-technical Section activities, mailing lists, etc.)

Dr. Faruq Sidiqi, ASCE Philadelphia Section President, is supportive of these efforts and expects the agreement to be finalized at the next Board meeting. Once that agreement is finalized, the real work begins.

The DVGI began last spring with a pronouncement by **Dr. Joseph Martin**, Chairman of the Geotechnical Group of the Philadelphia Section, that the next meeting of the group would be as the Geo-Institute under the leadership of **Mike Byle**. At that point planning began. Several individuals volunteered to spearhead the planning effort. The people are: **Alan Cadden, Frank Vibbert, Randy Thomas, Craig Calabria, Bashar Qubain, Richard Mabry and Richard Lee**. Richard Lee is the first GI-only member of the DVGI and has been instrumental in promoting our ef-

Villanova University. **Professor Traver, (610) 519-7899, Robert.Traver@Villanova.edu** or **Professor Falcone, (610) 519-7920, Frank.Falcone@Villanova.edu**. Department of Civil and Environmental Engineering, 800 Lancaster Ave., Villanova, PA 19085, fax (610) 519-6754.

GRADUATE STUDY AT DREXEL

By Dr. J.P. Martin, CAE Drexel

Civil Engineering M.S. programs are off with concentrations in Structural, Water resources, Geotechnical/Geosynthetics, Construction Materials & Transportation. A new Building Systems program is starting this year, an outgrowth of our Architectural Engineering program. Students compile a plan of study with a coherent core, that also meets their career goals.

Classes start September 21st. For full information on Fall, Winter and Spring courses, contact the Graduate Advisor, **Dr. S.C. Cheng** at (215) 895-2396; chengsc@drexel.edu. Admissions information: www.drexel.edu.

The group planned out our year and selected topics and discussed preliminary organization. The group unanimously agreed not to designate officers, but to serve as an ad hoc group. Michael Byle has been the lead organizer coordinating the efforts of the planning group.

The GI, nationally, has made it a priority to serve the non-ASCE geo-professionals and has made many cooperative efforts to have joint functions with geology and construction-based organizations such as AEG, DFI, ASCE, ACI, etc. It is our intent to continue that effort at the local level. Meeting topics planned for the coming months are directed at a broad audience and include projects and topics that cross disciplines from geology, hydrogeology, to geosynthetics, geotechnical construction, and traditional Geotechnical Engineering.

The next step for the DVGI is to appoint a leadership committee to develop bylaws and coordinate with the Philadelphia Section of ASCE in amending its bylaws. The DVGI Bylaws should be relatively simple and modeled on the Geo-Institute Bylaws with appropriate Philadelphia Section features. The Bylaws must govern how the leadership of the organization is elected. The previous Geotechnical Group Chair was appointed by the ASCE Philadelphia Section Board of Directors. The new organization should include officers elected by the DVGI membership and may include a Section-appointed board member. In addition, the Bylaws must establish the financial management of the DVGI, relationship with the Philadelphia Section and Dues structure for IO members. Both the Geo-Institute and Philadelphia Section of ASCE will have to review and accept the bylaws before they can be enacted by the DVGI membership.

The DVGI is the first local organization to operate under the Geo-Institute name. We hope to be the first Group to have a Section agreement and approved Bylaws. The Philadelphia Area has long been the home to firsts and as the first capitol of the United States deserves to have the first.

Everyone in the geo-professional community is invited to take part in this new organization. If you want to be a part of the planning, contact **Mike Byle** at (610) 650-8101 or mbyle@gfnet.com.

PHILADELPHIA TO HOST STRUCTURES CONGRESS 2000

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ASSOCIATES AND COLLEAGUES
TO COME ALONG WITH YOU!**

PHILA. SECTION AWARDS PROGRAM – NOMINATIONS NOW OPEN

The "Y2K" version of our Annual Section Award program is now open for nominations. These Awards recognize Section members and others for their contributions to the Civil Engineering Profession. All Awards will be presented at the Spring Social/Dinner Dance which will be held on **Friday, May 5, 2000** at the Sugarloaf Center in Chestnut Hill. (More information on the Spring Social will be included in upcoming issues of THE NEWS.)

RULES

- Nominations must be postmarked by **Friday, February 11, 2000**.
- Individuals may be nominated for awards by a member in any grade of membership.
- Individuals may receive only one award in a single year, but may be nominated for more than one award in a single year.
- Award recipients must be approved by the Section's Board of Directors.
- All awards are presented only in years in which, in the judgment of the Selection Committee or the Board, there is at least one suitable candidate.
- The Selection Committee may be required to nominate an alternate for Board consideration for each Award.
- The Selection Committee will also recommend to the Board whether the recipient should be nominated for applicable National or Regional awards by the Section.
- A nominee for any award **MUST** be a member in good standing of the Phila. Section in the year in which the nomination is made in all but two instances. For the Government Service Award and the Philadelphia History and Heritage Award, nominees need **NOT** be members of the Phila. Section.

November Dinner Meeting

(Continued from Page 5)

Vuchic concluded the presentations by adding that a long-range, coherent view of transit and transportation was needed in the region. This must be coupled with master plans for land use to help make the Philadelphia area more livable. The example of the search for a site for a new baseball stadium was only one instance which highlighted this need.

Questions and Answers

A lively question and answer period followed. Numerous comments and questions by members of the audience added special interest and in-depth responses to the splendid presentations of the speakers and the elaborating discussions.

President Siddiqui thanked and congratulated the team for an insightful and interesting presentation and offered tokens of the Section's appreciation for their efforts.

AWARDS

- Phila. Civil Engineer of the Year
- Phila. Young Civil Engineer of the Year
- Phila. Government Engineer of the Year
- Phila. Young Government Engineer of the Year
- Government Service Award
- Educator of the Year
- Phila. History and Heritage Award
- Individual Technical Awards:
 - Civil Engineering Manager of the Year
 - Construction Engineer of the Year
 - Geotechnical Engineer of the Year
 - Structural Engineer of the Year
 - Transportation Engineer of the Year
 - Water Resources Engineer of the Year

If you are interested in submitting a nomination for consideration, please contact **Bob Wright**, Awards Chairman at **(215) 686-5538** to obtain a nomination form. You should also contact Bob if you need any additional information on the Section Awards Program.

October Dinner Meeting

(Continued from Page 4)

economy. This will continue to grow especially as air couriers expand to meet the demands of the "just in time" delivery mentality now used by many businesses.

Mr. Testa remarked that, even though the long-range plan is being developed, the existing airport infrastructure must be maintained. Runways, especially, must be in tip-top shape to avoid any safety risks to planes. This will continue to require large expenditures.

Question and Answer Discussion

In response to several questions, Mr. Testa stated that more on-site parking was needed. Parking is a major source of revenue for airports. Unfortunately for him, this is controlled by the Philadelphia Parking Authority, so this revenue does not go directly to airport needs. He is attempting to lure a low-cost carrier to PIA, which will have a cascade effect on the fares of other airlines (when this has happened in other cities, all fares decreased).

He added that he has proposed to purchase most of the Tincum community and relocate residents to allow airport expansion, but this has not been accepted by Tincum.

Financially, he believes that \$125 million per year over the next ten years from the Federal Aviation Administration, coupled with the passenger facility charge of \$3 per passenger, will allow achievement of the master plan goals.

Numerous additional introspective, challenging and interesting comments and questions from members of the audience were addressed unflinchingly and in detail by our distinguished speaker.

President Siddiqui thanked Mr. Testa for an insightful and interesting presentation and offered a token of the Section's appreciation for his efforts.

JOIN THE SECTION'S TECHNICAL GROUPS

Younger Member Forum

Christopher Menna, President

City of Philadelphia, Dept. of Streets
Bureau of Surveys & Design – Bridge Section
MSB Building, Room 830
Philadelphia, PA
(215) 686-5070; fax (215) 686-5059

Construction

Brian Stover, P.E., Chairman

Urban Engineers, Inc.
530 Walnut St., 16th Fl.
Philadelphia, PA 19106
(215) 923-5077

Structural

Richard Roberts, P.E., Chairman

Pennoni Associates, Inc.
3001 Market St.
Phila., PA 19104
(215) 222-3000

Transportation

Chris Rod, P.E., Chairman

SEPTA - Eng'g & Construction Div.
1234 Market St., 12th Fl.
Philadelphia, PA 19107
(215) 580-7586

Engineering Management

Dennis MacBride, P.E., Chairman

SEPTA - Eng'g & Construction Div.
1234 Market St., 12th Fl.
Phila., PA 19107
(215) 580-7084

Delaware Valley Geo Institute (DVGI)

Dr. Joseph P. Martin, Chairman

Drexel University
Civil & Architectural Engineering Dept.
32nd & Chestnut Sts.
Philadelphia, PA 19104
(215) 895-2363

Michael Byle, Liaison

Gannett Fleming, Inc.
P.O. Box 80794
Valley Forge, PA 19484-0794
(610) 650-8101

IMPORTANT! REMAINING 1999-2000 MEETING NOTICES

MARK YOUR CALENDAR! for the dates of the Philadelphia Section, ASCE monthly meetings and social functions, as follows: (Check each upcoming edition of THE NEWS for additional details, possible date and topic changes.) THIS IS A TENTATIVE LIST.

ALL DINNER MEETINGS (except as noted): Cocktails – 5:30 pm; Dinner – 6:30 pm; Meeting – 7:30 pm

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

Thursday, February 17, 2000 Joint Dinner Meeting with South Jersey Branch, NJ Section, ASCE • Harbor League Club, Camden, NJ • Topic: "The Delaware River Aerial Tram Project." Temple and Villanova Universities Night

Thursday, March 16, 2000 Joint Dinner Meeting with Delaware Valley Chapter, American Concrete Institute (ACI) • Williamson's City Line • Topic and Speaker to be announced. Widener University Night.

Thursday, April 20, 2000 "Three Gorges Dam Project, China" • Speaker: Jennifer Lee. Swarthmore College Night.

Friday, May 5, 2000 Annual Spring Social Dinner Dance • Sugarloaf Conference Center, Chestnut Hill, PA. Details to be announced.

PLEASE PAY YOUR SECTION DUES!!

The Philadelphia Section, ASCE Board of Directors respectfully urges all Section members to bring their dues up to date. If your 1998-1999 dues (\$18.00) are in arrears, please remit your check immediately. Also, send in your check (\$18.00) for 1999-2000 dues when you receive the bill from National ASCE headquarters. Thus you will be assured of Active Membership and will enjoy all the services and functions of the Phila. Section, including the monthly newsletter, THE NEWS.

Members not receiving THE NEWS are deprived of all the technical and social activities announcements; reviews of previous Section meetings featuring addresses by distinguished speakers; updating of National and Local official reports;

Members in the News, and the numerous miscellaneous subjects covered in the monthly issues.

So — if you are in arrears, please do yourself and your Section a service, by mailing your check including the Phila. Section dues of \$18 per year, with the dues bill(s) which you have received from National Headquarters. Only thus will you enjoy all the benefits that accrue with receipt of the monthly issues of the Phila. Section newsletter, THE NEWS.

Mail your checks payable to Phila. Sec. ASCE, to P.O. Box 58186, Philadelphia, PA 19102-8186.

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