



Official Newsletter

for the
Pittsburgh Chapter



Association for
Bridge Construction & Design

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UPCOMING EVENTS & IMPORTANT DATES

March 17, 2005

Joint ABCD/ASCE Meeting with:

Sivaraman Venugopalan of Exponent Failure Analysis Associates

Topic: Failure Analysis of Post-Tensioned Tendons in Bridge Structures

RSVP by March 11, 2005

March 25, 2005

Bridge project nominations due for the Awards Program

Applications, transcripts and papers for the 2005 Scholarship are due

April 21, 2005

Annual Seminar

Topic: AASHTO LRFD Highway Bridge Substructure Design

May 19, 2005

Awards Program at the Four Points Sheraton

July or August

Golf Outing!

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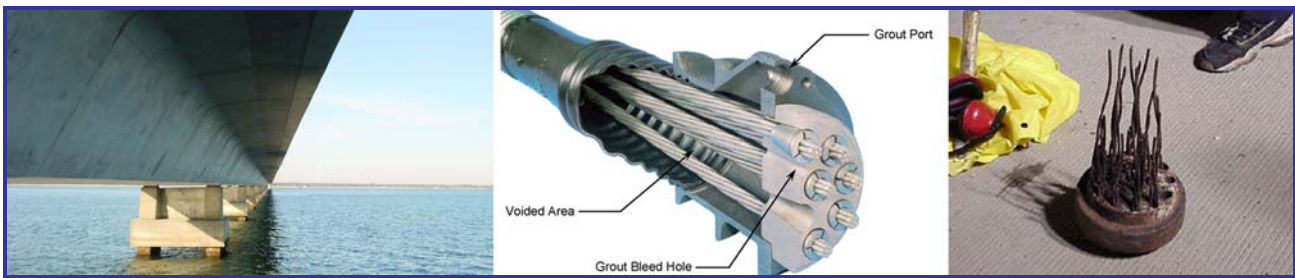


March Meeting

**Sivaraman (Siva) Venugopalan, Managing Engineer,
Philadelphia, PA Office, Exponent Failure Analysis Associates**

Speaking on

Failure Analysis of Post-Tensioned Tendons in Bridge Structures



Corrosion and corrosion related tendon failures have been disclosed on several segmental box girder bridges in Florida. One such structure was the Mid-Bay Bridge near Destin, Florida where as many as 11 tendons were replaced. Additionally, many other tendons exhibited cracking of the polyethylene duct. The visual inspection of this bridge revealed 1) corrosion of tendons and individual wires that ranged from minimal to severe, 2) presence of broken wires, and 3) cracking of the polyethylene duct. Based upon the various field and laboratory evaluations, a mechanism of tendon corrosion was proposed. Susceptibility of a particular tendon to deteriorate by the proposed mechanism varies depending upon the extent to which deleterious conditions are present.

Date: **Thursday, March 17, 2005**

Time: Social at **5:00 PM**; Dinner at **6:00 PM**; Program at **7:00 PM**

Place: Four Points Sheraton Pittsburgh North
910 Sheraton Drive, Mars PA

Cost: \$25.00 for Members of ABCD and/or ASCE
\$30.00 for Non-members of ABCD and/or ASCE
\$10.00 for ASCE Student Members

Contact: Sjaan Korvink at (412) 395-8888 or e-mail korvink@abcdpittsburgh.org
RSVP: By Friday, March 11, 2005



SAI ANNOUNCES NEW MANAGEMENT

STRUCTURE

August 9, 2004 - SAI Consulting Engineers, Inc. is pleased to announce several management appointments in their Pittsburgh headquarters and the opening of a new branch office near Harrisburg, PA.

Donald V. Gennuso, P.E., has been appointed Chief Executive Officer of SAI Consulting Engineers, Inc. Mr. Gennuso has 40 years in the transportation industry, including 26 years with SAI, and earned a Bachelor of Science in Civil Engineering from Carnegie Technical University. Mr. Gennuso is also a Registered Land Surveyor. Victor E. Bertolina, P.E., was promoted to President of SAI Consulting Engineers, Inc. Mr. Bertolina has 32 years of experience in transportation, including 25 years at SAI, and earned a Bachelor of Science in Civil Engineering from the University of Pittsburgh. Robert T. Balkovec, P.E., was named as Vice President – Engineering. Mr. Balkovec has 35 years of experience in transportation, including 25 years at SAI, and earned a Bachelor of Science in Civil Engineering from Carnegie Technical University. Mr. Glenn D. Stickel, P.E., was promoted to Vice President - Project Development and has also been named as a Principal in the firm. Mr. Stickel, who has over 24 years of experience in the transportation industry, including 22 years with SAI, served as a project manager since 1990. He received a Bachelor of Science in Civil Engineering from West Virginia University and a Master of Science in Civil Engineering from the University of Pittsburgh. James J. Lombardi, P.E., will continue his role as Vice President – Construction. Mr. Lombardi has over 32 years of diversified experience relating to highway and construction engineering, including 23 years with SAI, and earned a Bachelor of Science in Civil Engineering from the University of Pittsburgh. Mr. Lombardi is also a Registered Land Surveyor.



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SAI's new office, located near Harrisburg in Lemoyne, PA, opened in July 2004 and will be managed by Mr. Thomas Brado, P.E., a 35-year veteran of PennDot District 12-0 until his retirement in April 2004.

The strength of this new management structure ensures the continuation of SAI's commitment to its clients to provide high-quality service and deliver projects on time and within budget.

SAI Consulting Engineers, Inc., a leader in the field of transportation design, inspection, and construction management, has been providing government, business, and industry with high-quality, innovative, accurate, and reliable design and consulting engineering services for over 40 years. SAI is headquartered in Pittsburgh, PA with offices in Morgantown, WV and Harrisburg, PA.

SAI, an ESOP Corporation, employs more than 130 professionals in their Pittsburgh, Pennsylvania headquarters. SAI's dedicated staff has extensive experience and expertise in civil engineering, transportation engineering, structural engineering, lighting design, construction inspection and management, non-destructive testing, and other related disciplines. Its staff of experienced professionals makes it possible to effectively respond to and manage projects throughout the Commonwealth of Pennsylvania, the State of West Virginia, and other surrounding states.

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For more information, please contact Lisa Andrus-Pease, Marketing Coordinator, at (412) 392-8791.



Association for Bridge Construction and Design

HIGHWAY AND BRIDGE ENGINEERS

STV Incorporated, an ENR Top 100 design firm, is experiencing rapid growth in our Pittsburgh office. Opportunities for professional advancement are available for ambitious, dedicated individuals, who demonstrate that they are qualified for the following full-time positions:

Senior Bridge Engineer 10+ years experience; will be responsible for the supervision of all phases of bridge plan development. Must have a strong technical background in bridge design and a thorough knowledge of the PENNDOT procedures, manuals, and computer programs that pertain to bridge design and rehabilitation. BSCE and Pennsylvania PE required. Pennsylvania Turnpike experience and MSCE Degree preferred.

Bridge Engineer 2-5 years experience; will assist in all phases of bridge plan development. Must have a strong technical background in structural analysis and design and an interest in bridge design and rehabilitation. BSCE and EIT required. PENNDOT bridge experience and Pennsylvania PE preferred.

Senior Highway Engineer 10+ years experience; will be responsible for the supervision of all phases of highway plan development. Must have a strong technical background in highway design and a thorough knowledge of the PENNDOT and Pennsylvania Turnpike procedures, manuals, and computer programs that pertain to highway design and rehabilitation. BSCE and Pennsylvania PE required.

Highway Engineer 2-5 years experience; complete knowledge of PENNDOT and/or Pennsylvania Turnpike highway design procedures; InRoads experience a plus. BSCE and EIT required, Pennsylvania PE preferred.

These positions include a complete benefits program and 401(K) plan. Salary is commensurate with experience. For immediate consideration, please forward your cover letter and resume, including salary requirement to:

STV Incorporated
Four Gateway Center Suite 325
Pittsburgh, PA 15222
Fax No. (412) 392-3501

Email: sestokja@stvinc.com

Please visit our web site at www.stvinc.com

An Equal Opportunity Employer M/F/D/V



NEWS

ABCD Seminar

The annual seminar will be held on Thursday April 21, 2005. The topic this year is AASHTO LRFD Highway Bridge Substructure Design. Please see the flier in this issue of the newsletter for more details.

Awards Program & 2005 Scholarship

The Awards Program will be held on May 19, 2005. Bridge project nominations are due on March 25, 2005.

All applications, transcripts and papers for the 2005 Scholarship are due on March 25, 2005. More information on the awards program and scholarship is given later in this issue.

Golf Outing

It's never too early to look ahead to the golf outing!! More information will be sent out as we know more details. Think summer!!!

ABCD Polo Shirts

ABCD Polo Shirts are for sale! The cost of the shirts is \$25.00. Please contact Gary O'Melia at omelia@abcdpittsburgh.org to purchase them!





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DMJM HARRIS AN AECOM COMPANY

DMJM+HARRIS, a leading local and global transportation engineering firm, prides itself on the talent and dedication of its winning team of employees.

Don't let your career stagnate! Employment at DMJM+HARRIS will provide the opportunity to advance your career through involvement in a variety of assignments on an array of challenging and rewarding high-profile projects encompassed within our substantial backlog.

DMJM+HARRIS is currently seeking candidates to fill full-time **Bridge Design Engineer** positions for our downtown Pittsburgh office.

SENIOR BRIDGE DESIGN ENGINEER

Candidate must have solid knowledge of current PennDOT, PTC, and AASHTO specifications, standards, and procedures; must be proficient with bridge design software. Responsibilities will include: preparation and checking of bridge design calculations for superstructure, substructure, and foundations; review of design drawings; preparations of design submission reports; and coordination with project team members and clients.

Requires a B.S. in Civil Engineering, P.E. license is a must with 5+ years of design experience with steel and concrete bridges.

JUNIOR BRIDGE DESIGN ENGINEER

Candidate should demonstrate the ability to apply technical knowledge to analyze problems and develop strategies for efficient project completion. Must be adept at following established design and operating procedures, and flexible with changing design parameters as projects evolve from preliminary to final stages. Ethical behavior with the ability to effectively interact with others and communicate information in the form of technical reports, calculations, and drawings, is key.

Responsibilities include: preparation and checking of bridge design calculations for superstructure, substructure, and foundations, review of design drawings, preparation of design submission reports, and coordination with project team members.

Requires a B.S. in Civil Engineering; EIT registration and school course concentration in structures is preferred.

For benefits and more info, please visit our website (www.dmjmharris.com). Send your resume and cover letter in confidence to the contact information listed below. **NO PHONE CALLS PLEASE.**

William F. Alko, P.E.
Department Manager - Structures

DMJM+HARRIS
Four Gateway Center
20th Floor Suite 2000
444 Liberty Avenue
Pittsburgh, PA 15222-1222
email: william.alko@dmjmharris.com

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2004 ABCD AWARDS PROGRAM

The ABCD Awards Committee is seeking nominations from the membership for the 2004 ABCD Awards Program. The categories listed below have been selected in order to recognize the most deserving projects and persons within the local bridge industry. There is no need to specify the category for which the project is nominated, as the Committee will place each nominee in the most appropriate one.

Bridge owners, designers or contractors are encouraged to submit nominations by following the instructions below.

Also, we are seeking volunteers to serve on the Awards Committee and judge this year's nominations. Ideally, owners, contractors and engineers would all be represented on the Awards Committee. Contact the Awards Committee Chairman, Joe McKool, at 412-269-6362 or mckool@abcpittsburgh.org to volunteer to serve on the committee.

The Awards Program will be held on May 19, 2005. **Nominations are due on March 25, 2005.**

Eligibility requires nominated bridge projects to be:

- located within the Pennsylvania/Ohio/West Virginia tri-state area;
- substantially completed during the 2004 construction season.

1. Outstanding New Short Span(s) Bridge

- (a) Simple-span structure, any length; or
- (b) Multi-span structure, less than 75 m (250 ft) total length.

2. Outstanding New Multi-span Bridge

- (a) Multi-span structure greater than 75 m (250 ft) total length.
- (b) Substructure units should be new or substantially reconstructed.

3. Outstanding New Major Bridge

- (a) Main span minimum length greater than 100 m (325 ft); or
- (b) Total structure length greater than 250 m (825 ft).
- (c) Substructure units should be new or substantially reconstructed.

4. Outstanding Rehabilitated Bridge

- (a) Main load-carrying members must be retained: either modified, strengthened, or made redundant, but should not be new.
- (b) Substructure units should be retained but can be modified.

5. ABCD Achievement Award

An individual or group who has contributed the most to the Chapter or the local bridge community over the past several years.



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For each nomination, please submit the following:

- A written narrative of the project or person identifying reasons for consideration for nomination for the award (one or two pages).
- Two or more photographs (Categories 1 – 4 only). The photos can be individual prints or be incorporated into the narrative. For winning bridges, be prepared to provide a negative or image file suitable for enlarging to 8" X 10" size within one week.
- One or more 11" x 17" drawings or sketches (Categories 1 – 4 only)
- Listing of significant project features (Categories 1 – 4 only)
- Except for the submission form, a total of 4 complete submissions are required for a completed submission.
- The completed submission form, included below and also available at www.abcdpittsburgh.org/Awards2004.doc.

If desired, photographs, slides and/or negatives will be returned following the selection and awards presentation. ABCD reserves the right to publish copies of any submitted images for use in our newsletter, website, or other publications. Other than this limited right, the owner of the images maintains all rights to the images.

Nominations are due on March 25, 2005

Send nominations to: Michael Baker Jr., Inc.
Airside Business Park
100 Airside Drive
Moon Township, PA 15108
Attention: Joseph McKool, P.E.



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2005 SCHOLARSHIP INSTRUCTIONS

One \$1,000 Scholarship is available from the ABCD Pittsburgh Chapter to a full-time student in his/her third or fourth year of undergraduate study. Applicants must meet ONE of the following qualifications:

- Be a student registered in a Civil Engineering Program at an accredited educational institution within the Tri-state Region.
- Be the child of an ABCD Pittsburgh Chapter member and be enrolled in a Civil Engineering program at any accredited university.

Applicant requirements are the following.

1. At the time of application, applicants have to be registered in an accredited B.Sc. Civil Engineering program in the tri-state region. Schools in the tri-state area include the University of Pittsburgh and Satellite campuses, CMU, Penn State University and Satellite campuses, Point Park College, University of West Virginia, and Youngstown University.
2. If the legal guardian of the applicant is an **ABCD Pittsburgh** member, the accredited B.Sc. Civil Engineering program need not be within the tri-state region.
3. Applicants are to be in either their 3rd or 4th year of undergraduate study, on a full time basis.

In order to be considered for the award, applicants need to submit the following.

1. An official school transcript which includes academic record for the 2004 Fall Semester.
2. A **bridge-related** paper on a topic of their choice: 1.5 line spacing, 4 - 5 pages (8.5" x 11"), 10 point font, full justification with 1.5" margins.

Possible topics include:

- History of a **Pittsburgh Bridge**
 - Importance of bridges as infrastructure
 - Another bridge-related topic of the student's choosing
3. Submit a completed submission form, included below and also available at www.abcdpittsburgh.org/Scholarship2005.doc,

Contact Joe McKool via email at mckool@abcdpittsburgh.org if you have any questions.

Terms and conditions as follows.

1. The Scholarship Awards Committee will focus more on creativity than on academic achievement.
2. The decision of the Awards Committee is final, and no correspondence will be entered into.
3. In circumstances where no worthy submissions are received, the scholarship will not be awarded.
4. The Awardee will receive the award as a check in his/her name, presented at the Annual ABCD Pittsburgh Awards Banquet. Awardees are encouraged to attend this function.
5. Transcripts will be treated as private and confidential; however, by submitting a transcript an applicant gives up the right to privacy to the ABCD Pittsburgh Awards Committee.
6. Incomplete submissions will not be considered.

Applications, transcripts and papers are due on March 25, 2005.

Send nominations to: Michael Baker Jr., Inc.
Airside Business Park
100 Airside Drive
Moon Township, PA 15108
Attention: Joseph McKool, P.E.



2005 SCHOLARSHIP SUBMISSION FORM

Applicant's Personal Information	
Full Name	
Student Number	
Telephone Number	
Email Address	
Postal Mailing Address	
Educational Information	
Educational Institution	
Postal Mailing Address	
Expected Graduation Date	
Advisor's Name	
Advisor's Telephone Number	
Advisor's Email Address	

ABCD 2005 Seminar



AASHTO LRFD HIGHWAY BRIDGE SUBSTRUCTURE DESIGN

Featuring

Thursday, April 21, 2005

James L. Withiam, P.E.

Principal of

D'Appolonia, Monroeville, PA

Substructure Design using Load and Resistance Factor Design (LRFD)

JAMES L. WITHIAM, P.E. has over 25 years of geotechnical design experience and for nearly 15 years has directed projects to develop LRFD-based design specifications and manuals of practice for AASHTO, PADOT and ADSC/DFI for shallow and deep foundations, retaining walls, buried structures and micropiles. Jim was the PI and lead instructor for the 2-day NHI course "LRFD for Highway Bridge Substructures" that was presented nearly 50 times to state DOT and other public agencies and private entities.

The course will focus on the fundamentals of LRFD for the geotechnical design of highway bridge substructures. For years engineers have designed foundations and walls for highway and other applications using allowable stress design (ASD) methods. In ASD, all uncertainty in loads and material resistance is combined in a factor of safety or allowable stress. For most highway design, the American Association of State Highway and Transportation Officials (AASHTO) *Standard Specifications for Highway Bridges* represents the primary source document for ASD of substructures. In 1994, AASHTO approved Load and Resistance Factor Design (LRFD) in the *LRFD Highway Bridge Design Specifications*. In LRFD, the uncertainty in load is represented by a load factor and the uncertainty in material resistance is represented by a resistance factor. The 1-day course will focus on:

- Differences between ASD and LRFD for substructure design
- Benefits of LRFD for substructure design
- Process for selecting and applying load factors and load combinations
- Process for geotechnical design of foundations and walls using the AASHTO LRFD Specifications

Seminar Schedule

8:15 AM.....Registration and Continental Breakfast
9:00 AM.....Theory
12:00 Noon.....Buffet Lunch
1:00 PM.....Theory Continued
4:00 PM.....Conclusion

Registration Fee

ABCD Members.....\$70.00
Non-Members.....\$75.00

Space for the seminar is limited to 50—register as early as possible. Registration/Payment deadline for the seminar is Friday, March 25, 2005. The last day that registrations will be accepted is Friday, April 1, 2005.

This seminar will be held at the Four Points Sheraton Pittsburgh North, 910 Sheraton Drive, Mars, PA 16046.

Registration fee includes a copy of Load and Resistance Factor Design (LRFD) for Highway Bridge Substructures, Reference Manual, published by the U.S. Department of Transportation, which will be used in the seminar.

You can register online at:
<http://abcdpittsburgh.org/seminar.htm>

For more information, contact:
Gary O'Melia, ABCD President-Elect
W.E.C. Engineers, Inc.
1370 Washington Pike, Suite 304
Bridgeville, PA 15017
Phone: 412.257.8774
Fax: 412.257.8815
Email: gomelia@wecengineers.com

Officers

President	Geoffrey Goldberg	(412) 392-8765
President-Elect	Gary O'Melia	(412) 257-8774
Secretary	Jane-Ann Patton	(412) 476-2000
Treasurer	Mike Hebor	(412) 497-6005

Committee Chairpersons

Community Affairs	Gary O'Melia	(412) 257-8774
Membership	Keith Chong	(412) 395-8888
Program	Sjaan Korvink	(412) 395-8888
Public Relations	Laura Volle	(412) 269-6438
Technical	Manjeet Ahluwalia	(412) 373-7133
Web Site	Jeremy Shaffer	(412) 681-1521
Awards	Joseph McKool	(412) 269-6362

Directors

2001 - 2004	2002 - 2005	2003 - 2006
Gary O'Melia	Geoffrey Goldberg	Bill Ferko
John Weres	Jane-Ann Patton	
Thomas Ryan	Sjaan Korvink	

Legal Counsel

Victoria Lynn DeFrank – Attorney at Law
(412) 281-7955

Sustaining Members

- * Brayman Construction Corporation
- * Bridge Technologies
- * DMJM+HARRIS, Inc.
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- * Gannett Fleming, Inc.
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