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Delaware Valley
Chapter

DELAWARE VALLEY GEO-INSTITUTE

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September 2016 Dinner Meeting

SPEAKER: Michael J. Miluski, P.E. — Vice President, Compaction Grouting Services, Inc.

TOPIC: Compaction Grouting Fundamentals

DATE: Tuesday, September 20th, 2016

LOCATION: Valley Forge Casino Resort Hotel , Adams Franklin Room
1160 First Avenue, King of Prussia, PA 19406

TIME: 5:30 PM Social Hour, 6:30 PM Dinner and
7:15 PM Presentation

***Registration and Payment Online at <http://www.dvgi.org/> ***

Mr. Miluski’s presentation will discuss the mechanics and different uses of compaction grout. The presentation will include a definition of compaction grout and what is considered the industry standard in accordance with ASCE’s Compaction Grouting Consensus Guide. Michael will touch on the important aspects of specifying, reviewing, and monitoring compaction grouting projects. Specification preparation topics will include grout refusal, criteria, mix design, estimating quantities, and utilizing different pricing schemes. Key points of field observation include calibrating the pump strokes, determining pump rate, pump rate versus injection pressure, and tracking quantities. The presentation will also include several case histories.

ABOUT THE SPEAKER:

Michael is a professional engineer with a BS and MS in Civil Engineering from Widener University. While completing his master’s program Michael developed, performed, and analyzed a full scale research program evaluating the effectiveness of differing means and methods of compaction grouting in Karst. Post-graduate, Michael worked for Schnabel Engineering Services for about 10 years developing his expertise in geotechnical engineering with a focus on difficult foundation support and karst related problems. Michael later changed career paths from consulting engineering to specialty geotechnical contracting by opening and operating the Mid-Atlantic office for Denver Grouting Services. He then branched out and started Compaction Grouting Services in 1998 after Denver Grouting was purchased by another specialty geotechnical contractor. Michael continues to apply this broad geotechnical engineering and specialty contracting background to provide value engineering solutions for potential clients. Under Michael’s direction, Compaction Grouting Services has enjoyed 18 years of successful operation and continued growth with a strong reputation as a premier compaction grouting contractor in the Northeast/East Coast service area. Michael is a respected member in the grouting community who presents annually at The University of Texas at Austin’s Fundamentals of Grouting Short Course and biennially at The Sinkhole Conference sponsored by the National Cave and Karst Research Institute. In addition to being a member of ASCE, ICOG, DFI and the Geo-Institute, Michael also serves on the Compaction Grouting Consensus Guide Committee and is currently collaborating with other industry leaders in updating this publication.

One Professional Development Hour (PDH) will be provided for this dinner meeting.



May 2016 Dinner Meeting

Caisson Foundations in Philadelphia - Past, Present, and Future Richard E. Mabry, P.E.

Over the years, practices and techniques for the design and construction of drilled-in caissons in the Philadelphia area have changed and evolved. In particular, there are differences of opinion regarding appropriate design and bearing support values, and there are suggestions that even larger bearing values are appropriate. Also, caisson construction has become more problematic with frequent delays and cost extras, and some designers and contractors are reluctant to utilize caissons. Reports of caisson loading tests indicate different aspects of the supporting capabilities and load deformation behavior of the schist and gneiss rock in Philadelphia. These rocks are similar to the crystalline metamorphic rocks formations throughout the Piedmont Province that extends from New York City to Birmingham, Alabama. The results from loading tests elsewhere in the Piedmont provide additional data relevant to the load supporting capabilities of caissons in Philadelphia.

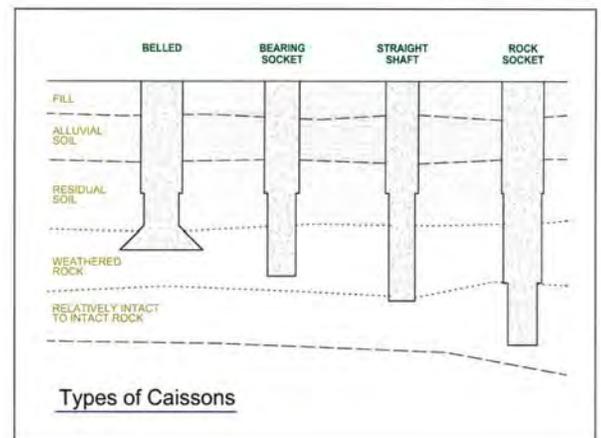


Image courtesy of Presenter

The concepts of bearing capacity and settlement with respect to rock materials, including the transitional and variable zone of weathered rock, were reviewed for caisson bearing support. Also, characterizing the properties of the rock materials, such as by strength, core recovery, RQD and other rating systems, or as a single-value intermediate geomaterial, was assessed. Finally, some of the construction and construction evaluation practices were reviewed. All of these testing results indicated that it is possible to utilize greater supporting capacities and more efficient caisson designs. Some of the analysis and design methods, such as LRFD, that are related to strength and elastic deformation provide a means for evaluating and using higher bearing capacities for caissons in Philadelphia.



Image courtesy of J. Milius

ABOUT THE SPEAKER:

Mr. Richard E. Mabry specializes in geotechnical engineering and has performed investigations and consultations for more than 2,000 projects encompassing a broad range of design and site conditions and utilizing an extensive variety of geotechnical techniques and applications. Some of these projects where Mr. Mabry provided the geotechnical engineering services received design awards from several professional organizations. The projects where Mr. Mabry performed investigations and consultations include major buildings and other facilities, commercial and industrial developments, transportation structures, and energy facilities. He has also directed field inspection and construction monitoring for site development, foundation construction, and embankment projects. Mr. Mabry has particular expertise with geotechnical practice related to mine and sinkhole subsidence, and refuse and waste engineering, and has been a consultant to other engineering organizations for special problems and for application reviews. In addition, Mr. Mabry has been retained to perform forensic investigations related to insurance claims and litigation matters.



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ANNOUNCEMENTS

3rd Annual DVGI Golf Outing

The 3rd Annual DVGI Golf Outing was held on June 24th at the Jeffersonville Golf Club in West Norriton, PA. The weather was perfect and the refreshments were cold for the 36 DVGI members and friends who participated that day. Golfers included a balanced mix of Consultants, Contractors, and Suppliers from across the Delaware Valley and beyond. The Menard/GTA foursome took home the best team score prize, while the Earth Engineering/Tencate/Axis team had the dubious honor of the worst team score more affectionately known as “most honest”. Matt Church of Maser Consulting won the longest drive award and Phil Gauffreau also from Maser Consulting won the closest to the pin prize. In addition, Mike Urban of Gannett Fleming took home the crowd favorite shortest driver hole. After the round of golf, participants gathered at the club’s pavilion for al fresco dinner and drinks. It was a great event to be able to socialize with



DVGI members and friends in a more informal setting. Special thanks to our 19 corporate sponsors which made the event a success, providing over \$2,800 for the DVGI Scholarship fund. The feedback we received from the golfers was overwhelmingly positive and we are looking forward to next year’s golf event. Stay tuned for details.



Images Courtesy of R. Preuss and T. Loux



ANNOUNCEMENTS

Earn PDHs at 2016-2017 DVGI Events

Upcoming Dates for 2016 Dinner Meetings and events are as follows:

- ◆ **September 20th:** Michael Miluski, P.E., Compaction Grouting Services, Inc. —
“Compaction Grouting Fundamentals”
- ◆ **October 18th:** Ghislain Brunet, Maccaferri — “Rock Slope Protection Case Histories”
- ◆ **November 15th:** TBD

One PDH will be awarded for most dinner meetings that you attend.

HAVE DVGI PUBLISH YOUR ARTICLE

Do you have an interesting article on a project or individual in your organization that you would like to have published in the DVGI newsletter? Please submit your articles for consideration in an upcoming edition to Theresa Loux at theresa_loux@golder.com

DVGI Merchandise Available for Purchase

Coffee mugs (\$8) and lapel pins with the DVGI logo (\$5) are available for purchase. See Russ Preuss if you are interested in purchasing either of these items.

ASCE/G-I Members:
Read past and present issues of Geo-Strata magazine online at www.asce.org



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EVENTS AND CONFERENCES

SEI: Ultra-High Performance Concrete (UHPC) in Bridge Structures - (1 PDH)

Ultra-high performance concrete (UHPC) is a steel fiber-reinforced, cementitious-based material that offers exceptionally high mechanical and durability related properties. Over the past decade, approximately 150 bridge structures throughout North America have incorporated UHPC into their design. This presentation will provide a brief overview about what UHPC is, what characteristics it exhibits, the advantages to using this material, and the various structural applications that have proven successful over the years.

SPEAKER: Gregory Nault PE, SE, LafargeHolcim

LOCATION: Parkview Ballroom

Valley Forge Casino Resort

DATE: Thursday, September 22, 2016

TIME: 5:30-8:30 PM

COST: Members \$45, Non-members \$50,

RSVP:

<https://www.picatic.com/event14714951834912>

EWR: Earthships - A New Solution (1 PDH)

Earthships are alternative sustainable housing that offer solutions to important issues such as: energy, water, food, shelter, sewage and recycling. The discussion will focus on sustainable, passive building design and construction for single family, multi-family and communities.

SPEAKER: Jonah Reynolds, Earthship360

LOCATION: Michael's Deli, 130 Town Center Rd
King of Prussia, PA

DATE: Wednesday, October 5th, 2016

TIME: 5:30-8:00 PM

COST: \$30 per person | \$25 per student

RSVP:

<http://events.r20.constantcontact.com/register/event?oeidk=a07ecz8sb5d2a6a96c5&llr=aos5oylab>

CENTRAL PENNSYLVANIA GEOTECHNICAL CONFERENCE

Hershey, Pennsylvania

January 25, 26, & 27, 2017

<http://www.central-pa-asce-geotech.org/>



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