



STATE OF PRACTICE: QUALITY CONTROL OF DEEP FOUNDATIONS WORKSHOP

TUESDAY, APRIL 24, 2018
8:00 A.M. – 5:00 P.M.

DELTA HOTEL BY MARRIOTT TORONTO EAST
2035 Kennedy Road
Toronto, ON M1T 3G2 Canada

Pile Dynamics, Inc are please to present a one-da workshop on Quality control and Assurance of Deep Foundations and various testing methods. A Certificate of Participation documenting 6.5 of hours of instruction (PDH) will be provided. Check with your engineering board of registration for their continuing education requirements. At the end of the Workshop participants may choose to take a multiple choice **Dynamic Measurement and Analysis Proficiency Test**.

Registration starts at 8:00am

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PROGRAM TO INCLUDE:

- QA/QC of Deep Foundations Pre- or During Installation
- Overview – Why do we test?
- Basic Wave Mechanics
- QA/QC of Deep Foundations Post Installation
- Load Testing of Deep Foundations
- ASD & LRFD Methods: Codes and Economics
- Open Discussion
- **Optional:** Dynamic Measurement and Analysis Proficiency Test

LEARNING OBJECTIVES

- Assess capacity of drilled shafts by various field testing applications including Dynamic Load Testing, Static Load Tests and Bi-Directional Tests
- Assess Integrity of drilled shafts by various NDT methods including Crosshole Sonic Logging, Low Strain Integrity Testing, Thermal Integrity Profiling and other inspection devices
- Learn the advantages and limitations of various integrity and capacity methods in drilled shafts and choose the appropriate methods for analysis
- Understand basic concepts of PDA testing and advancements in Dynamic Load Testing
- Learn the appropriate interpretation of integrity testing results and the integrated method of data collection, processing, management and presentation of results

WHO SHOULD ATTEND:

Geotechnical, structural and construction engineers; contractors, researchers and students interested in or having the need for Load testing and quality control of deep foundations. Topics covered include static testing, high strain dynamic testing, low strain integrity testing (PIT), Cross-hole sonic logging (CSL), Shaft Inspection, and Thermal Integrity Profiling (TIP).



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CERTIFICATE OF PARTICIPATION

This program corresponds to 6.5 Professional Development Hours. A Certificate of Participation documenting the number of hours of instruction (PDH) will be provided to those in attendance. Check with your engineering board of registration for their continuing education requirements.

OPTIONAL: The **Dynamic Measurement and Analysis Proficiency Test** will take less than 90 minutes to complete. The test will cover the theory of Wave Mechanics, Case Method (PDA) equations, data quality assessment, data interpretation and basic CAPWAP analysis. The test is designed for those with experience in using the Pile Driving Analyzer[®] system and CAPWAP to perform High Strain Dynamic Foundation Tests. The best preparation for the test is work experience following an initial PDA training. The workshop will refresh the participant's theoretical background and be a reminder of some important points. Those taking the test are advised to study "Appendix A" and "Helpful Hints" of the PDA manual, review some of the EXAMPLE data provided with the PDA, and read the CAPWAP background material. These materials are supplied with PDA purchases. Those without access to the manuals and examples should please contact softwaresales@pile.com in advance of the test date. For more information about the Proficiency Test website: www.PDAProficiencyTest.com.

WORKSHOP LECTURERS

George Piscsalko, P.E. is the President of Pile Dynamics, Inc. He is a licensed Professional Engineer in the States of Ohio, Michigan, and New Jersey. He has 30+ years of experience in designing test equipment for the deep foundation industry. He has been involved in the design and development of foundation test equipment including the Pile Driving Analyzer[®] (PDA) system, Pile Integrity Tester (PIT), Cross Hole Analyzer (CHA), and Thermal Integrity Profiler (TIP) for drilled shafts and ACIP piles as well as the Pile Installation Recorder (PIR) for ACIP piles. He holds US Patents for the design of the Remote Pile Driving Analyzer and the Thermal Wire[®] cable system.

Patrick Hannigan, P.E., is the President of GRL Engineers, Inc. He has spent the vast majority of his 39 year engineering career focused on deep foundation design and testing. He received a Bachelor of Science degree in Civil Engineering from the University of Notre Dame, and a Master of Science degree in Civil Engineering from the University of Missouri-Rolla. He has published numerous technical papers and was the principal author for the 1996, 2006, and 2016 editions of the Federal Highway Administration manual "Design and Construction of Driven Pile Foundations". He is a licensed professional engineer in 22 states and is a member of the American Society of Civil Engineers, Deep Foundations Institute, Pile Driving Contractors Association, and the Association of Drilled Shaft Contractors.

HOTEL RESERVATIONS

Attendees should make their own hotel reservations if needed.

Hotel Name: DELTA HOTEL BY MARRIOTT TORONTO EAST

- Link: <http://www.marriott.com/hotels/travel/yyzsb-delta-hotels-toronto-east/>
- Parking available
- Fitness Center & Spa
- Restaurant



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Registration Information:

This event space is limited to the first 30 registrants. To register, please email completed registration form to Registration@pile.com.

Name(s): _____

Organization: _____

Email: _____

Address: _____

City: _____ State/Province: _____ Postal Code: _____ Country: _____

Phone: _____

Registration Fees (includes, course notes, breakfast, AM/PM breaks and lunch):

- Workshop Only (8:30am – 4:30 pm) \$100.00
- Dynamic Measurement and Analysis Proficiency Test (*No Discounts*) \$200.00

**If you do not pass the test you are allowed one (1) retake of the test at no additional charge at the next course*

Amount: Program total \$ _____

Discount (if applicable) subtract \$ _____

Grand total \$ _____

CREDIT CARD INFORMATION

I am paying by: ___ VISA ___ MasterCard ___ American Express ___ Check

Name (as on credit card): _____

Account no.: _____ Expiration date: ___/___ Verification code: _____

Statement Billing Address: _____

City _____ State / Province _____ Zip _____ Country _____

Signature _____

Please note: No refunds provided.

