Geo-Congress 2019

GSP 307

Foundations





Papers from Sessions of the
Eighth International Conference on
Case Histories in Geotechnical Engineering

Philadelphia, Pennsylvania
March 24–27, 2019

EDITED BY Christopher L. Meehan, Ph.D., P.E.
Sanjeev Kumar, Ph.D., P.E.
Miguel A. Pando, Ph.D., P.Eng.
Joseph T. Coe, Ph.D.

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FOUNDATIONS

SELECTED PAPERS FROM SESSIONS OF THE EIGHTH INTERNATIONAL CONFERENCE ON CASE HISTORIES IN GEOTECHNICAL ENGINEERING

March 24–27, 2019
Philadelphia, Pennsylvania

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American Society of Civil Engineers

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Preface

From the early days of modern geotechnical engineering, sharing field experience on the performance of geostructures in the form of case histories has driven the advancement of knowledge for the geotechnical profession. Starting in 1984, Professor Shamsher Prakash formalized this tradition, organizing the First International Conference on Case Histories in Geotechnical Engineering. This conference brought together over 190 engineers from 38 countries to share their experiences, learn from each other, and advance the profession. By 2013, the Seventh conference in this series had grown to nearly 320 engineers attending from 53 countries spanning the globe, culminating in symposia to honor the legacy of the late Ralph B. Peck and to honor Clyde N. Baker Jr. But the essence of the conference had not changed: to advance our profession through lessons learned from case histories and shared engineering judgment.

Recognizing the significant role that case histories play in the geotechnical engineering profession, the American Society of Civil Engineers (ASCE) has decided to continue the tradition of this long-standing conference series by merging this conference into its annual Geo-Institute Congress. The result is Geo-Congress 2019: The Eighth International Conference on Case Histories in Geotechnical Engineering, which was held in Philadelphia, Pennsylvania on March 24-27, 2019.

The following pages comprise the third volume of ten Geotechnical Special Publications (GSPs) containing papers from Geo-Congress 2019: The Eighth International Conference on Case Histories in Geotechnical Engineering. This conference featured experiences and observations from numerous geoengineering projects and case histories, including recent "MegaProjects." Presented topics are organized into the following conference proceeding volumes:

Volume 1: Embankments, Dams, and Slopes
Volume 2: Earth Retaining Structures and Geosynthetics
Volume 3: Foundations
Volume 4: Earthquake Engineering and Soil Dynamics
Volume 5: Soil Improvement
Volume 6: Geotechnical Materials, Modeling, and Testing
Volume 7: Engineering Geology, Site Characterization, and Geophysics
Volume 8: Geoenvironmental Engineering and Sustainability
Volume 9: Soil Erosion, Underground Engineering, and Risk Assessment
Volume 10: Data, Software, Education, and a Tribute to Ralph Peck

Many individuals are responsible for the content of these published works, all of whom contributed to maintaining the high standards that are set for ASCE's GSPs. An international call for papers and rigorous peer review process yielded 403 accepted

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technical papers, that were presented in 36 podium sessions and numerous poster sessions, in addition to the keynote award presentations, Geo-PITs (Powerful, Informative Talks), and panel sessions. Papers in these volumes were reviewed in accordance with ASCE's GSP standards, with each paper receiving two or more independent, technical peer reviews. Publication in these Proceedings required concurrence by at least two peer reviewers.

This publication series culminates two years of effort by the conference organizing committee whose focus has been to build upon and enhance the success of the past International Conferences on Case Histories in Geotechnical Engineering. On behalf of the conference organizers and the ASCE Geo-Institute, we wish to express our gratitude to all of the session chairs and reviewers for their diligent efforts to make these Proceedings a reality. We also wish to extend our thanks to Geo-Institute staff, whose tireless efforts working with authors, session chairs, and members of the conference organizing committee were instrumental in the conference planning process. Finally, we would like to thank the authors for their contributions to the Proceedings. The papers that have been submitted by our colleagues do a great service to the legacy of the previous "Case Histories in Geotechnical Engineering" conferences, and are of great value to the geotechnical engineering profession.

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Contents

Deep Foundations: Piles

A Continuum Based Nonlinear Analysis of Laterally Loaded Piles.....1
Bipin K. Gupta and Dipanjan Basu

The Reaction of CPT to Excavation Unloading and Its Effect on Laterally Loaded Piles 10
Hongjiang Li, Songyu Liu, Liyuan Tong, and Tao Yang

Coupled Numerical Analysis of Variations in the Capacity of Driven Energy Piles in Clay 20
Arvin Farid and Daniel P. Zimmerman

Pile Design for Use in High-Tension Cable Median Barriers.....33
Mojdeh A. Pajouh, Karla A. Lechtenberg, and Ronald K. Faller

Large Scale Substation Foundation Remediation.....42
Richard E. Costa, Gary McAllister, Andrew Blaisdell, and Baker W. Tee

Load Transfer Mechanism of Micropiles in Weathered Rock 55
Audai K. Theinat and Ronaldo Luna

Comparison of Settlement Response of Piled-Raft Foundation Subjected to Combined Loads Computed from Finite Element and Analytical Models 63
Nadarajah Ravichandran and Shweta Shrestha

Deep Foundations: Driven Piles

Optimizing the Design of Driven Pile Foundations with Instrumented Static Load Tests 74
Peter A. Narsavage

Experimental and Numerical Analysis of Bearing Capacity of Large Diameter Open-Ended Pipe Piles 88
Yuan Guo, Jiale Li, and Xiong (Bill) Yu

Validation of Pile Design Methods for Closed-Ended Driven Pipe Piles 98
Fei Han, Vibhav Bisht, Monica Prezzi, and Rodrigo Salgado

Geotechnical Centrifuge Experiments on Bearing Capacity of Pipe Piles.....111
Jiale Li, Yuan Guo, and Xiong (Bill) Yu

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New Technology Center Foundation System—A Case Study in Driven Pipe Piles, Camden, New Jersey 119
Frederick A. Brinker

Development of Axial Load Transfer (T-Z) Analytical Model for the PSC Piles 130
Md. Nafiul Haque and Murad Y. Abu-Farsakh

A Numerical Study of Pre-Boring Impacts on Side Friction of Piles 140
Shengli Chen, Lin Li, and Zhongjie Zhang

Analysis and Assessment of the Existing Deep Foundation and Design of Supplemental Deep Foundation for Dolphin Tower 149
Said Iravani

Evaluation of Direct Pile-CPT Methods for Estimating the Ultimate Capacity of Driven Piles 167
Mohsen Amirmojahedi and Murad Abu-Farsakh

Deep Foundations: Drilled Shafts

Modulus of Elasticity Impact on Equivalent Top-Loading Curves from Bi-Directional Static Load Tests 178
Rozbeh B. Moghaddam and Van E. Komurka

Foundation Design Case Study—Comcast Technology Center, Philadelphia, PA 189
Daniel P. Marano Jr.

Performance of an Osterberg Cell (O-Cell) Load Test on a High-Capacity Production Drilled Shaft at the Kosciuszko Bridge 199
Matteo Ferrucci, Daniela Zellers, Sherif Hanna, Robert Adams, and Jeff Moryl

Behavior of Rock-Socketed Drilled Shaft under Uni-Axial Loading—A Parametric Study 213
Saidur Rahman, Shafiq Siddiqui, and Kimberly Sharp

Sinkhole Development and Propagation during Drilled Shaft Construction in West-Central Florida during the 2017 Atlantic Hurricane Season 223
Christopher B. Stryffeler and Inthuorn Sasanakul

Hudson Yards: A New Look at High-Capacity Caissons to Bedrock in Manhattan 236
Michael Paquette, Saul S. Shapiro, and Marc J. Gallagher

Effects of Cavities on the Mechanical Behavior of Pile Foundations in Weak Rock 247
Nguyen Thi Thao Van, Shima Kawamura, and Satoshi Matsumura

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A Robust Approach for Selecting LRFD Characteristic Values of Uncertain Soil Parameters for Design of Drilled Shaft in Sand 256
Sara Khoshnevisan, Xiaohui Tan, Mengfen Shen, Hsein Juang, and Yongjie Zhang

Lateral Load Test for Large Diameter Drilled Shafts for the Kosciuszko Bridge Replacement 269
Daniela Bastos Zellers, Sherif Hanna, Matteo Ferrucci, Robert Adams, and Jeff Moryl

Special Topics in Deep Foundations

Verification Load Testing of Micropiles under Combined Axial and Lateral Forces 284
John Montgomery Schultz, Siamak Jafroudi, and Thang Van Nguyen

Assessment of Helical Anchor Capacity in Marine Clays for Aquaculture Applications 299
Leon D. Cortes-Garcia, Melissa E. Landon, Aaron P. Gallant, and Kimberly D. Huguenard

Emergency Bridge Abutment Repair with Pressed-In Pipe Piles 308
Takefumi Takuma, Hiroyuki Nishimura, and Masashi Nagano

High-Capacity Micropiles in Edmonton Shale 318
Onur Kacar, Andrew Cushing, and Michael R. Lewis

Numerical Study of Quasi-Static to Dynamic Pullout Capacity of Anchors in Sand 329
Bahman Sheikh and Tong Qiu

Quantifying the Influence of Construction Parameters on Hollow-Bar Micropiles Pullout Capacity in Sandy Soil 340
Mohammad Ahsanuzzaman, W. Alex Smith, Mohammed A. Gabr, and Roy H. Borden

A Case History of Installation and Load Testing Challenges for Auger-Cast Piles in the Piedmont Geology 348
G. Bradford Drew, Sujit K. Bhowmik, and James L. Willmer

Studies on Cyclic Behaviors of Unit Bucket for Tripod Foundation System under Various Loadings via Centrifuge Model Tests 363
Y. H. Jeong, J. H. Kim, H. J. Park, and D. S. Kim

500 Walnut Street: High-Capacity Auger Pressure-Grouted Piles Used to Support a 26-Story, Multi-Family Tower behind Independence Hall 372
Michael Kwiatkowski, Philip E. Gauffreau, Daniel E. Stevenson, and W. Morgan NeSmith

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Visualization of Torpedo Pile Penetration and Pullout in Transparent Synthetic Soil Representative of Soft Marine Clays 387
Abdelaziz Ads, Mehdi Omidvar, Stephan Bless, and Magued Iskander

Complexities of Mixed Foundation Systems for Boston Highrise 398
Sandra M. Iberg, Kelvin Wong, and Damian R. Siebert

Shallow Foundations

Settlement of 16-Story Office Tower on Raft Foundation Situated on Piedmont Residuum 412
Paul W. Mayne

Traditional and CPT-Based Foundation Designs: A Comparative Study 426
R. Dagger, D. Dasenbrock, P. W. Mayne, and D. A. Saftner

Strength of Model Footing Resting on Treated Coir Mat Reinforced Sand 435
M. T. Prathap Kumar and R. Sridhar

Analysis of Differential Settlement of Circular Tank Foundations on Multilayered Soil 444
Suranga Gunerathne, Hoyoung Seo, William Lawson, and Priyantha Jayawickrama

Interference of Two Closely Spaced Strip Footings Embedded in Cohesionless Fibre-Reinforced Foundation Soil Bed 454
Anupkumar G. Ekbote and Lohitkumar Nainegali

Inspection Protocol for Structures Subjected to Distress Due to Expansive Soils 465
Muawia A. Dafalla and Mosleh A. Al-Shamrani

Concrete Slab-on-Grade Reinforced by Geogrids 474
Xiaochao Tang, Mohamad N. Jlilati, and Isaac Higgins

Comparison of Estimated Soil Settlements Using Strain-Dependent and High-Strain Elastic Moduli 480
J. R. Davie, T. Liao, M. R. Lewis, and J. L. M. Clemente

Multivariate Global Sensitivity Analysis of Rocking Responses of Shallow Foundations under Controlled Rocking 490
Aria Fathi, Mehran Mazari, and Mahdi Saghafi

Conical Load Test-Induced Settlement in Central Florida Soils: Class A Prediction of Field Performance with Advanced Soil Models 499
A. Felipe Uribe-Henao, Luis G. Arboleda-Monsalve, Sergio Savater, Manoj Chopra, and Larry Jones

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A New Analysis of Circular Raft on Layered Elastic Soil 509
Hesham Elhuni, Bipin K. Gupta, and Dipanjan Basu

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