



DEEP FOUNDATIONS INSTITUTE

DFI TRAVELING LECTURER

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Summaries of Available Presentations

Fundamentals of Cast-in-Place Piles

This lecture examines the development and evolution of cast-in-place piles in the United States and Europe and describes current industry equipment and installation practice. Conventional continuous flight auger (CFA) and drilled displacement piles are addressed.

Application of Cast-in-Place Piles in Intermediate Geomaterials

The development of more powerful and robust installation platforms has made it feasible to install cast-in-place piles into materials once considered too resistant for the system. This lecture reviews current installation platforms and tooling and presents case histories for installation in soft limestone, partially weathered rock, shale and glacial till.

Drilled Displacement Pile Performance at a Site with Coastal Plain Overlying Residual Soil

This lecture is a case history of a project in Aiken South Carolina where both Coastal Plain soils and residual soils were encountered within the pile depths. Because of the difference in working grade across the site, the length of pile in each of the formation varied. After an extensive testing

program, the installation process was modified to accommodate the variable response to displacement of the Coastal Plain and residual soils.

Design Methodologies for Cast-in-Place Piles

This lecture is an in-depth treatment of current design methodologies for cast-in-place piles. Conventional continuous flight auger (CFA) and drilled displacement piles are addressed.

The Application of Drilled Displacement Elements for Liquefaction Mitigation and Foundation Improvement

When drilled displacement piles are installed in materials that exhibit granular behavior, there is a significant increase in density in the vicinity of the piles. The increase is most pronounced in loose to medium dense materials and can be utilized to mitigate liquefaction and increase the foundation response stiffness of the mass of the material penetrated. Case histories are presented wherein ground improvement elements were installed using drilled displacement pile processes to mitigate liquefaction and increase allowable foundation loading.

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