A B S T R A C T

Failures of Helical Piles and Helical Anchors and Associated Lessons Learned
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A wise man once said, if you do enough engineering, eventually you will run across projects that don’t always work out as planned. A variety of projects will be presented that experienced problems including one that resulted in a temporary moratorium on helical piles in New York City, a tie-back wall at a stadium, a sea wall with poor load test results, failure of a helical soil nail slope stabilization, excessive settlement of grouted helical piles, and a residential underpinning project where a worker was unfortunately killed. Two failures can be explained by the lack of lateral bracing at the tops of helical piles. The tie-back failure may be explained by loss of bearing at the foot of the wall and incorrect earth pressure distribution. The poor load tests for the sea wall may be explained by lack of torque calibration, and the soil nail failure occurred by a design change during construction. Settlement of the grouted piles appeared to occur as a result of down drag and insufficient pile length. Through a study of these case histories, the audience should gain important instruction for how to avoid these failures in the future.