

North Central Reliability Project

New Jersey

Keller implemented and followed stringent environmental protocols due to work occurring in residential neighborhoods as well as many wetland areas.



The project

PSE&G planned to convert the existing 138kV transmission line to a 230kV transmission line between the West Orange Substation, Roseland Switching Station, and the Metuchen Switching Station. In order to do this, foundations needed to be installed to support the upgrade.

The challenge

Almost all of the new foundations were installed under the energized 138kV line. The length of the project was approximately 30 miles and included a variety of drilling conditions, requiring rock excavation techniques, polymer drilling fluid, temporary and permanent casing, and dry-hole excavation.

The solution

Keller installed 186 foundations for the project, consisting of 156 drilled shafts ranging in diameter from 7 to 14 feet with depths between 19 and 115 feet. The remaining 30 foundations were 10-foot thick concrete caps between 10 feet by 10 feet to 28 feet by 28 feet with 24-inch diameter rock anchors approximately 15 feet long each. The installation of the drilled shafts required low headroom equipment.

Project facts

Owner(s)

PSE&G

Keller business unit(s)

Keller

Main contractor(s)

Keller

Engineer(s)

URS Corporation

Solutions

Deep foundations

Markets

Power

Techniques

Drilled shafts

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