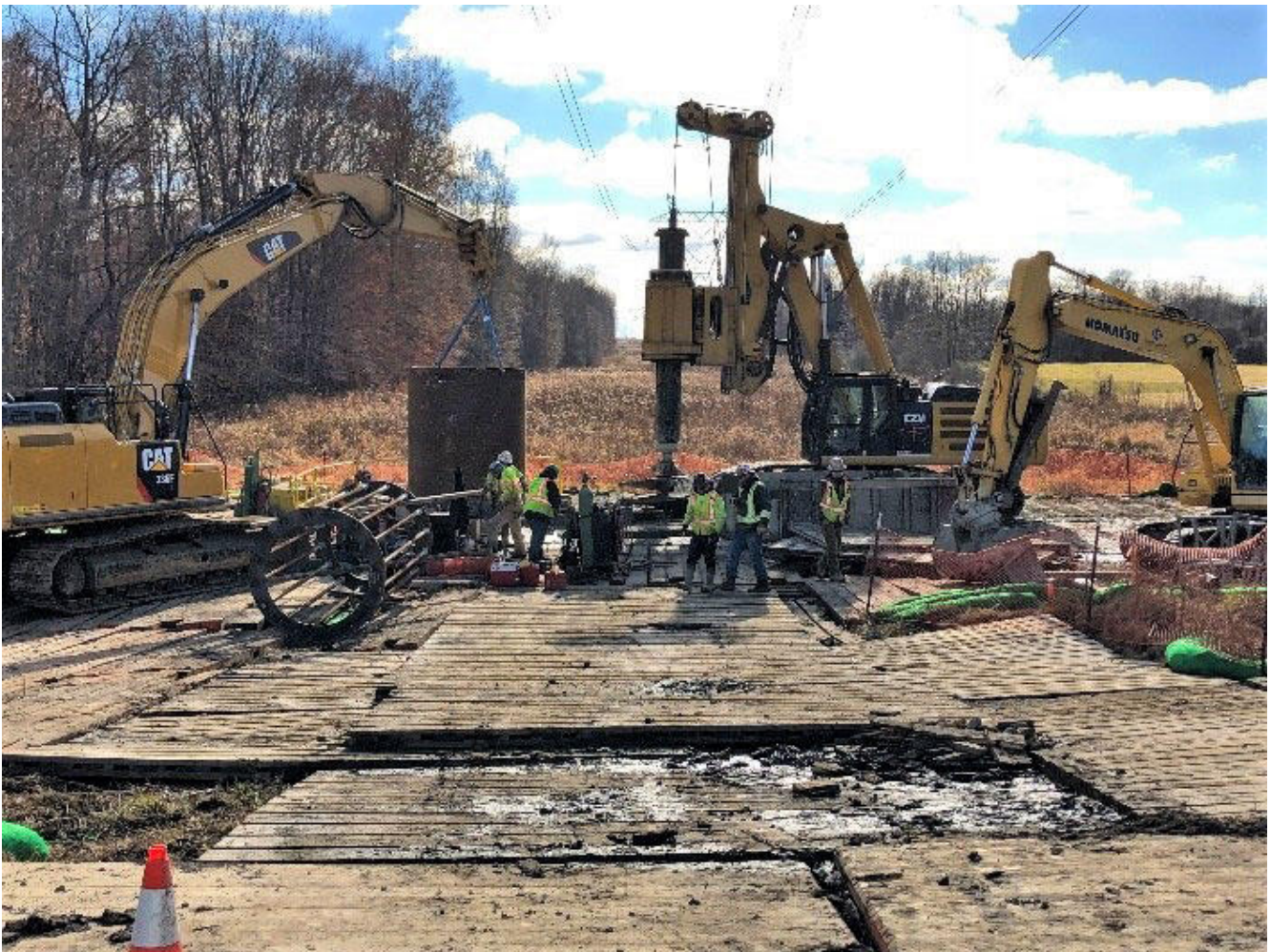




## McClelland Transmission Line

New Castle, Pennsylvania

Keller offered an accelerated schedule to complete all work in a single phase rather than the two originally planned and was able to assist in finishing ahead of the client's anticipated schedule, which saved them money.



### The project

The project consisted of the construction of a new 0.5-mile transmission line connecting a new substation to an existing transmission line. The project had 11 transmission poles, each 130 ft tall, supported on drilled shaft foundations ranging from 84 to 132 in. diameters. The soil conditions warranted the use of polymer slurry due to a high-water table in swamp-like areas.

# The challenge

The difficult soil conditions included cobbles and boulders that often make drilling very difficult and pose the threat of caving. Some locations required drilling beneath existing live 345 kV power lines.

# The solution

Permanent casing in 4 to 6 ft sections was placed, advanced, and welded together. This process was repeated several times to prevent soil caving. A specialty short-mast rig was used and line-height measurements are taken to ensure proper clearances were met and maintained. In the swampy areas, Keller installed permanent casing in multiple, much longer sections suppressing the potential for soil caving.

“ The team quickly and safely adapted to rapidly changing conditions and their performance was above par. They were a key component in safely completing this project prior to the anticipated completion date with the quality we require.

**Alan Osborne**  
Operations Manager, Giordano Construction Company

# Project facts

**Owner(s)**

FirstEnergy

**Keller business unit(s)**

Keller

**Main contractor(s)**

Giordano Construction Company

**Engineer(s)**

FirstEnergy

**Solutions**

Deep foundations

**Markets**

Commercial

**Techniques**

Drilled shafts

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