



## Bucklin Point Sewage Treatment Plant

East Providence, Rhode Island, USA

Adjacent to the Seekonk River, the Narragansett Bay Commission is upgrading the Bucklin Point Sewage Treatment Plant.



## The project

The 1.5-acre site will house two new circular clarifiers and a UV disinfection building. Ground conditions at the proposed site consisted of approximately 30 ft of sandy silt/clayey silt overlaying 10 ft of glacial till, with rock present at approximately 40 ft below grade. Groundwater was encountered at 14 ft below the existing grade.

Keller was contracted to design and build an excavation support and deep foundation solution for the new structures.

Keller installed 900 linear ft of driven sheet pile, internal bracing, and one row of tieback anchors to support the ~60 ft excavation. Further investigation revealed the rock was more permeable than expected and that additional mitigation would be required to provide a dry excavation. Keller installed a grout curtain within the permeable rock layer to cut off groundwater flow below the tip of the sheet pile wall.

Once the excavation was completed, Keller installed 700 micropiles ranging from 30 ft to 50 ft deep across the site to provide deep foundations. The entire project work progressed as scheduled.

## Project facts

### Owner(s)

Narraganset Bay Commission

### Keller business unit(s)

Keller

### Main contractor(s)

Barletta Heavy Division / Engineering

### Engineer(s)

Keller

### Solutions

Support of excavation

Groundwater control and dewatering

### Markets

Infrastructure

Water, sewage and waste disposal

### Techniques

Sheet piles

Anchors

Micropiles

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