

Centennial Wash Bridge Replacement

Wenden, Arizona, USA

To support a new bridge across US 60 in Arizona, Keller successfully installed deep foundations using advanced wet techniques to overcome a high water table.



The project

The Arizona Department of Transportation is replacing an existing bridge on US 60 with a new seven-span bridge. The new bridge will be constructed next to the existing one, and paved approaches will tie it to the existing roadway.

Due to a high-water table (10 ft below grade), significant scour depths, and the presence of clayey or silty sand of varying densities, the geotechnical engineer proposed drilled shafts as the foundations for the abutments and piers.

Keller was contracted to install the drilled shafts, and the final design consisted of 16 shafts as deep as 110 ft (two shafts at each abutment and pier location).

To overcome the high-water table, Keller implemented wet techniques, using polymer slurry and a permanent liner to stabilize the shaft walls during construction. Keller installed the drilled shafts ahead of schedule, allowing construction to move to the next phase.

Project facts

Owner(s)

Arizona Department of Transportation

Keller business unit(s)

Keller

Main contractor(s)

FNF Construction, Inc.

Engineer(s)

Arizona Department of Transportation

Solutions

Deep foundations

Markets

Infrastructure
Transportation

Techniques

Drilled shafts

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