

Flamingo Water Resource Center

Las Vegas, Nevada, USA

Flamingo Water Resource Center is Clark County, Nevada's largest water treatment facility. It allows reclaimed water to be discharged back into Lake Mead.



The project

Three new buildings were proposed to ensure the facility's longevity and production, including an influent division structure, a bar screen facility, and a screening and grit facility. Ground conditions comprised silty sands, lean and fat clays, and sandy silts of varying depths and thicknesses. Groundwater was present at 7 ft to 14 ft below grade.

The challenge

Construction was performed during the extreme summer heat, sometimes over 118 degrees F.

The solution

The geotechnical engineer recommended a deep foundations solution to support the new structures and limit settlement, ultimately concluding CFA (auger cast) piles as the optimum solution. Across the three building locations, Keller installed 333 auger cast piles, ranging from 50 ft to 64 ft deep, each with full-length reinforcement. Shifts began earlier in the day to ensure employee safety in the heat, with cooling areas available during rotations and breaks. Keller's performance exceeded expectations, meeting the contracted project schedule and allowing the next construction phase to begin.

Project facts

Owner(s)

Clark County Water Reclamation District

Keller business unit(s)

Keller

Main contractor(s)

J.A. Tiberti Construction Co, Inc.

Engineer(s)

HDR Engineering Inc.

Solutions

Deep foundations

Markets

Infrastructure

Tanks

Techniques

CFA (auger cast) / ACIP piles

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