



John F. Kennedy Airport

Queens, New York, USA

Keller provides dewatering and groundwater treatment for airport upgrades.



The project

The John F. Kennedy Airport is currently under redevelopment to build two new terminals and expand and modernize existing terminals, roads, and dining. In addition to this larger development, several infrastructure projects at the airport also required dewatering and treatment, including:

- Aeroterm Cargo to construct a new cargo hanger.
- JFK-12 Water Meters, where the New York City Department of Environmental Protection issues a contract to meter the airport's water supply, requiring several deep excavations.
- Construction of Terminal 1, which will completely replace two terminals.
- Utility installation for the Port Authority of New York and New Jersey, including constructing an electrical substation with underground transmission lines.

The challenge

With groundwater present at 7 ft to 8 ft below the existing grade, dewatering solutions were required across the various projects. Due to years of airport operation, groundwater across several areas had petroleum-related contamination.

The solution

Keller provided dewatering to facilitate dry excavations. To address potential groundwater contamination, temporary water treatment systems consisting of settling tanks, iron sequestrants, electric centrifugal transfer pumps, bag filter units, and granulated carbon were installed.

Aeroterm Cargo

Keller installed six dewatering wells to facilitate utility installation for the hangar's operation.

JFK-12

Water Meters Keller provided four dewatering wells, each 12 in. in diameter and 60 ft deep, across three sites. Additionally, Keller provided two water treatment systems, one with the capacity to treat 2,000 GPM (gallon-per-minute) and the other to treat 1,500 GPM.

Terminal 1

At the site for terminal 1, the main contractor was able to sump groundwater during utility installations, but much of the collected water was contaminated. Keller provided a 1500 GPM water treatment system to decontaminate the water for discharge.

Work Orders 112/113

The transmission lines for the new substation were installed below grade in three micro-tunnels under existing expressways. Keller installed 12 deep wells to dewater the launch and receiving pits for the micro tunnels. Each pit produced 1200 to 1300 GPM, with peak flows up to 1500 GPM. Keller provided two water treatment systems at each location to address contamination in dewatering discharge and operated these systems 24/7.

Project facts

Owner(s)

Port Authority of New York and New Jersey

Keller business unit(s)

Keller

Main contractor(s)

Ferreira Construction, C.A.C. Industries, D'Annunzio & Sons,
Grace Industries

Solutions

Groundwater control and dewatering

Markets

Infrastructure
Transportation

Techniques

Dewatering
Groundwater treatment

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