

# CASE STUDY

## ▶ Avenue of Memories 24" Water Transmission Main

### An important project creates new opportunities for use in a historical section of New Jersey.

A prominent partner for water resources customers, the Kiely Family of Companies solves complex water challenges with specialized capabilities ranging from full-service design-build projects to engineering, construction, and project management.

So when a customer was looking for a construction partner to strengthen and improve the potable water infrastructure of the historical Fort Monmouth section of Monmouth County, New Jersey, they called on KIELY for help.

The project was delivered on time, on budget, and on expectation, but not without some challenges that were met and overcome by the KIELY team.

#### Challenges

- ▶ The discovery and presence of a large, abandoned underground storage tank (UST) containing No. 4 fuel oil in the direct path of the proposed 24" transmission main
- ▶ Detection of an extensive, abandoned geothermal well field in the same route as the proposed main
- ▶ A 10' diameter historic brick culvert conveying flow from the Wampum Brook under the Avenue of Memories

#### Solution

Since KIELY has experience in designing and building water resources projects of all types and sizes, this project was a natural fit. As the construction partner chosen for this project, we provided our customer with a meticulously crafted package that ultimately led to the installation of over 5,100 linear feet of 24" DIP and 20" HDPE transmission mains within the Avenue of Memories (Monmouth County Rt. 537).

#### Overcoming Undetected Obstacles

One of the most impactful challenges during this project was the underground storage tank which was not identified during the engineering process but was discovered during KIELY's construction phase.

Following the removal and disposal of the underground storage tank, the project hit another snag: the discovery of an abandoned geothermal well field that led to a construction redesign that KIELY seamlessly responded to.



### Maintaining the Integrity of a Historic Site

Knowing that Fort Monmouth's history can be traced back to 1928, KIELY and our customer partner took additional care to maintain the integrity of the area's historic features whenever possible. One of these features was a brick culvert conveying Wampum Brook that was originally planned to have a 24" DIP water main jack and bored underneath it.

While not responsible for the design of the project, KIELY suggested a much more low impact option that would ensure the integrity of the culvert, designing and proposing a double barrel, 20" HDPE transmission main that would run 20 feet beneath Wampum Brook.

This option was presented to the customer and the project stakeholders, and ultimately was approved and constructed by the KIELY team.



### Final Project Details

The installation of the requested 5,100 linear feet of water main through Fort Monmouth was a project that encompassed many challenges and meticulous construction, but with the experts at KIELY responding to our customer's unique requirements, solutions for each challenge were found and seamlessly integrated into construction.

Due to the responsiveness of the KIELY team, the project was completed and delivered to the customer with few additional schedule disruptions.

The Fort Monmouth historical area is now ready for the continued development plans and expansion of commerce in Monmouth County.

With technical expertise and an innovative organizational structure, the Kiely Family of Companies provides customers with a range of services and capabilities, including a unified business approach and a single point of contact for unparalleled accountability for project success.

Our design-build services enable design and construction teams to strategize as one, delivering a wealth of customer benefits and providing a tailored solution optimized for cost, quality, and efficiency.

Trust the Kiely Family of Companies with your next project.

**For more details on this project or how we can respond to your project's unique requirements, contact us.**

David J. Applegate, PE, CME, T3, W3  
Sr. Vice President - Water Resources  
908 745 8871  
kielybuilds.com

