

PITCHER SERVICES PROJECT PORTFOLIO

MICHELS[®]

Scope of Work

In 2010 the San Francisco Public Utilities Commission awarded the contract to Michels for a new tunnel beneath the San Francisco Bay. This tunnel would be part of the Hetch Hetchy Water Improvement Program to upgrade the system's aging pipelines.

Due to difficulties with the tunnel boring, Pitcher Services was hired by Michels in 2012 to complete 43 borings to 110ft around the tunnel shaft for installation of freeze pipes. This would allow for freezing and minimize water intrusion during repair of the shaft. In addition, Pitcher was asked to drill through the 2" steel shield of the boring machine while eliminating sediment and water intrusion.

Highlights

- Freeze pipe installation verticality within 1.5ft
- Three drills working concurrently to complete the project
- Specialized diamond drill bit ordered to drill through shield of tunneling machine

Challenges & Benefits

- Meticulous drilling to within 1/8th of a degree accuracy
- No seepage or sediments appeared in final tunnel due to exceptional sealing of initial pilot boring



Hetch Hetchy Water Improvement Program 2012

Equipment/personnel:

- Failing 1500 drill rig
- Fraste Truck-mounted w/mud shaker system



Client Reference:

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