



Key achievements

- Shoring walls consisting of Bored Piles, Jet Grouting, Rock Injections and Ground Anchors to retain the excavation pit of up to 15m depth
- Dry Deep Soil Mixing utilized for general stability of the future excavation pit
- Keller Reverse Circulation Drilling system used in sensitive soils (water drilling technique with double rotary head)

Application

Excavation pit
Ground improvement
Deep foundation

Technique

Bored Piles
Jet Grouting
Dry Deep Soil Mixing
Ground Anchors
Rock Injections
Steel Core Piles

Market

Health care

Client

Sykehusbygg HF

Main contractor

HAB Construction AS

Contract Value

165 million NOK

Keller companies

Keller Geoteknikk
Keller Grundbau
Keller Grønteknikk

The project

In 2017, Oslo Commune decided to invest in the re-development of the existing Radiology Hospital. The project was labelled high priority due to the significant growth seen in the Oslo region. The first proton center in Norway, advanced technology in radiation therapy, will be established within the premises of this facility. The new clinic buildings will be fully operational in 2024.

The challenge

- Sensitive soil including silty soft clay and quick clay
- Presence of, fully operational, existing facilities of Radium Hospital
- Eliminating the risk of ground water ingress into the excavation pit
- Execution of 2.0m diameter Jet Grouting columns from the existing hospital basement
- Sequencing works to maximize the production (up to 7 drilling rigs concurrently on site)

The solution

- ✓ Water drilling with double rotary head to minimize disturbance of the surrounding soil
- ✓ Real time monitoring of shoring walls movement (inclinometers and anchor load cells)
- ✓ Acoustic Column Inspector® used to ensure proper installation of Jet Grouting columns

Main contractor's Project Manager:

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April 2020

Project end date:
July 2021