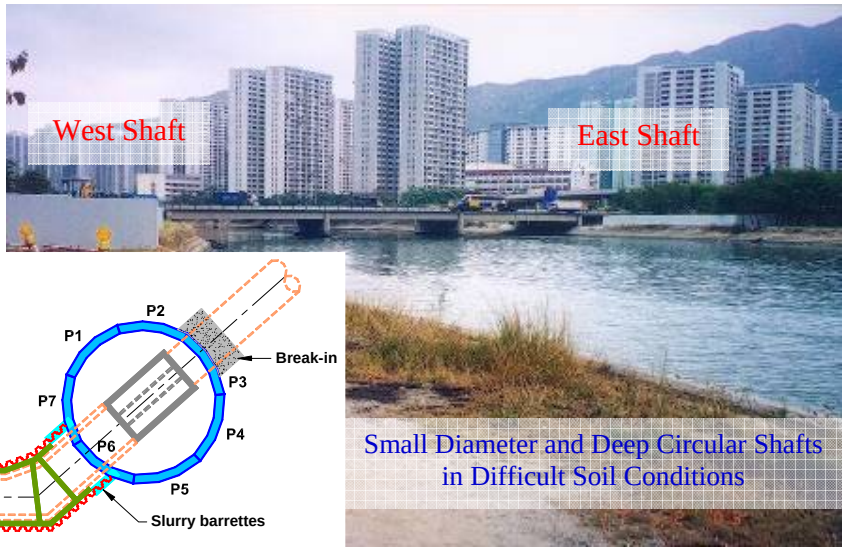
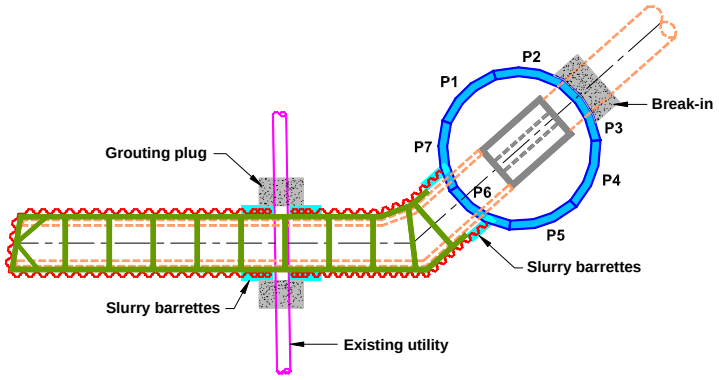
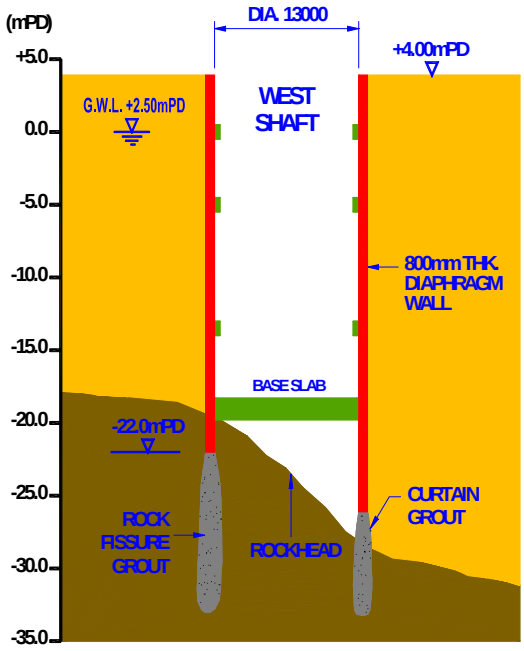
Construction of Diaphragm Walls for West & East Shafts and Driving Sheet Pile for Connection Tunnel







The foundation works are part of the power cable tunnel project for Tuen Mun River Crossing in Hong Kong. Works were completed in year 2003.

The main foundation scope was the design and construction of two circular shafts, 13m diameter, for the departure and arrival of the Tunnel Boring Machine, TBM. The scope includes:

- Diaphragm wall, 800mm thick, 28m deep.
- TBM break-in using slurry wall.
- Contact and curtain grouting below the toe of the diaphragm wall.
- Pump wells and pumping tests.
- Sheet piling including connection to the diaphragm wall.

Soil conditions were extremely difficult, an open rockfill layer, presence of boulders and a variable rock level. Environment was sensitive with the presence of existing utilities and nearby sea wall.

Therefore, it was a real challenge to complete the works safely, on time and to the satisfaction of the Client.

CLP CABLE TUNNEL PROJECTS – TUEN MUN RIVER CROSSING

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Ring beams are casted during the progress of the bulk excavation.

Presence of boulders was one of soil difficulties.

Driving sheet piles using high frequency vibration in order to minimize the effect of vibration on adjacent structures.

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