GENERAL

The Sathorn Pump Station is one of the interceptor pump stations for the Bangkok Wastewater Treatment Plant Project, Yannawa Works. It is a deep rectangular underground chamber located on Chong Nonsi Road, Sathorn, Bangkok. The chamber has 0.8m thick cast in-situ diaphragm walls with toe depth of 20.0m below ground level. It was designed for maximum excavations depths of up to 16.2m inside the chamber to allow construction of a 1.5m thick base slab and internal structures. The pump station is located mostly in and below the existing khlong/canal so that a temporary cofferdam was used for construction of diaphragm wall and the pump station.

The pump station has two bulk head openings to receive inflow and outflow 2.25m diameter pipes at 12.5m and 6.2m below ground level respectively.

WORK UNDERTAKEN

DIAPHRAGM WALL: 1,245.00sq.m. (0.8m Thick)
COFFERDAM: 656.00sq.m.
INSTRUMENTATION: 2 Inclinometer Tubes in the wall.

Location of Sathorn Pump Station.

Cofferdam and working platform for diaphragm wall construction.

TYPE OF WORK: Cast in-situ Diaphragm Wall
OWNER: Bangkok Metropolitan Administration
SUPERSTRUCTURE CONTRACTOR: Samsung – Lotte – CEC Joint Venture
DESIGNER: Ove Arup and Partners International Ltd.
PERIOD: 1996
Sectional view of temporary work for diaphragm wall construction in the khlong.

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References: