



DARLAND BOAT HOUSE

Pranburi

Object

Solidification of silty and sandy soil with in-situ soil-cement mixing for construction of boat berth and channel walls.

Project Description

Foundations and soil retaining walls for construction of a private luxury boat house, 25m long boat berth, channel walls and boat ramp.

Type of Work

Construction of block type soil retaining walls with soil-cement columns. Driving pre-cast concrete piles for building foundation.

Owner

Private.

Designer

Warnes Associates Co., Ltd.

Project Schedule

June 2006

Construction Method

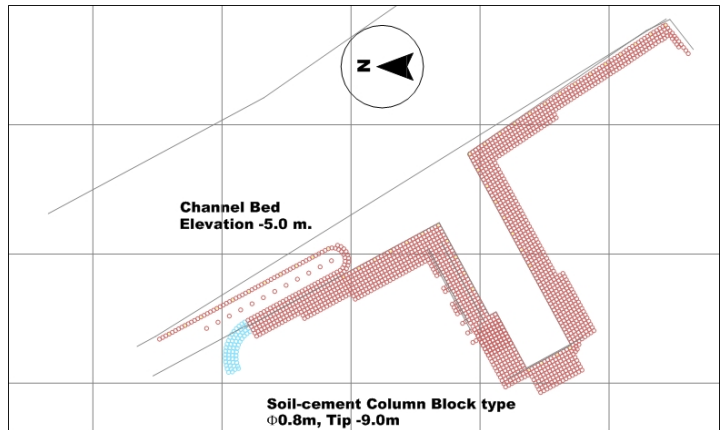
- Mechanical Deep Soil Mixing
- Pile Driving

Construction Details

Soil-Cement Columns: 1,707 ($\phi 0.8\text{m} \times 4\text{-}8\text{m}$)
Driven Piles:
0.25x0.25x10m = 64
0.30x0.30x10m = 86
WF 250x250-64.4kg = 23
H 10x10-17.2kg = 47

Subsoil Conditions

Silty fine sand: 0.0-9.0m
Hard silty clay: 9.0-12.0m
Weathered Rock: 9.0-12.0m



Soil-cement Column Retaining System Layout.



Deep soil mixing (soil-cement column works) in progress.



Installation of concrete facing walls for boat berth and ramp by other — soil retained by soil-cement columns.

REFERENCES:

- Thasnanipan, N., Win M. A and Thayanan Boonyarak (2007) "Minimizing Ground Movement by Using Deep Soil Mixing Technique" (in Thai). The 12th National Convention on Civil Engineering. Phitsanulok, Thailand. pp 240-246.