Object
Construction of a 2 level underground car park under a football field.

Project Description
Construction of bored pile foundations, diaphragm walls and deep excavation works for 2 level basements and football field on top.

Owner
Srinakrin Wiroj University

Architects & Engineers
Krunthep Tanakom Co., Ltd. (Designer)
Plan Consultants Co., Ltd.
Kumjornkit Construction Co., Ltd. (MC)

Project Schedule
2008-2010

Construction Method
- Bored piling and diaphragm walling
- Deep excavation to −7.3m with diaphragm walls using top-down construction method

Construction Details
Foundation bored pile: \( \phi 0.60 \times 18.5 \text{m} = 508 \)
Diaphragm walls: 7,664 sq.m. (0.60m thick \times 16\text{m} deep)
Excavation volume: 102,000 cu.m
Basement floor: 36,000 sqm
Concrete volume: 39,624 cu.m
Reinforcement: 4,218 tons

Subsoil Conditions
- Soft clay: 2.0-14.5m
- Medium clay: 14.5-17.0m
- Stiff clay: 17.0-22.0m
- Hard clay: 22.0-41.5m
- Sand: 41.5-46.0m
- Hard clay: 46.0-49.0m
- Dense sand: 49.0-60.0m

REFERENCES:
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Layout of the project (Courtesy of the Designer)
Excavation with diaphragm wall using top-down construction method for basement construction.

Substructure works in progress.