

Urban excavation

Diaphragm wall - Shaft grouted barrettes

VINCOM BLOCK B

HO CHI MINH CITY - VIETNAM



Diaphragm wall and barrette works for the first six-level basement project in Vietnam

Vincom Block B project is a 28-storey building and part of Vincom Ho Chi Minh City Complex which is located in one of the “Golden Land” areas in downtown Ho Chi Minh City - Vietnam. Encompassed by the main avenues Dong Khoi, Le Loi, Le Thanh Ton, Nguyen Hue and Ly Tu Trong, the 20,500m² captured project will serve as a luxurious complex with a 6-level basement underground, the deepest basement ever built in Vietnam.

Bachy Soletanche Vietnam’s scope of work consisted of 19,498m² Diaphragm Wall and 132 nos. shaft grouted barrettes. Two sets of KS and two sets of KL grabs were mobilized to stick to a committed schedule of 21 weeks.

Diaphragm wall

The first step was to build a 1.2m thick diaphragm wall, down to a 49.7m depth for the future six-basement excavation. The water table level is 6.1m below ground level. The 93 panels were executed in 2 months.



Artist's view of the project

OWNER:	VINCOM JOINT STOCK COMPANY
ENGINEER:	OVE ARUP (HK)
MAIN CONTRACTOR:	BACHY SOLETANCHE VIETNAM
PERIOD OF WORKS:	JUNE TO DECEMBER 2008

MAIN QUANTITIES:

- Diaphragm Wall: 19,498m² (depth: 49.7m)
- Shaft grouted barrette:
 - 92 nos. 1,500mm x 2,800mm; depth: 70.40m max.
 - 40 nos. 800mm x 2,800mm; depth: 48.70m max.



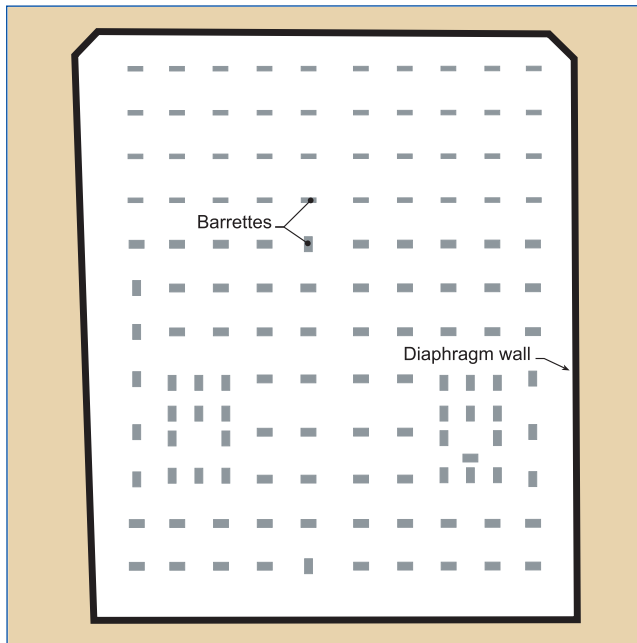
Shaft grouted barrettes

Two static load tests were carried out to prove the effectiveness of shaft grouted barrettes. Shaft grouting improves friction enhancement when deeper foundations are required. Shaft grouting is performed through tube-a-manchette previously installed into the steel cages. One test was carried out on a plain barrette and one on a shaft grouted barrette with the same size at 2.5 times working load. After the test, shaft grouted barrette option was preferred by the client and only shaft grouted barrettes were realized after earth moving.



Mr. Bao Long Tran Cao

130 nos. kingposts (plunged stan-chions) were then installed, at a maximum depth of 22.7m, to serve as temporary columns for “top-down” construction method. Removable steel beams were used.



Earth moving in the excavation and structural works

< Plan view

Site overview (load test in the center)

