

Cut and Cover

Diaphragm wall - Barrettes

THU THIEM TUNNEL
HO CHI MINH CITY - VIETNAM



Construction of two cut and cover approaches on both sides of a tunnel under the Saigon river



Night shift on Ho Chi Minh City side

The Thu Thiem Tunnel is part of the important Saigon East-West Highway Project and is located on both side of the Saigon River, with the approaches being in West (District 1 of Ho Chi Minh City) and East (Thu Thiem). The diaphragm wall and barrette works for the two approaches were carried out by Bachy Soletanche Group Limited and Bachy Soletanche Vietnam, both Solétanche Bachy subsidiaries.

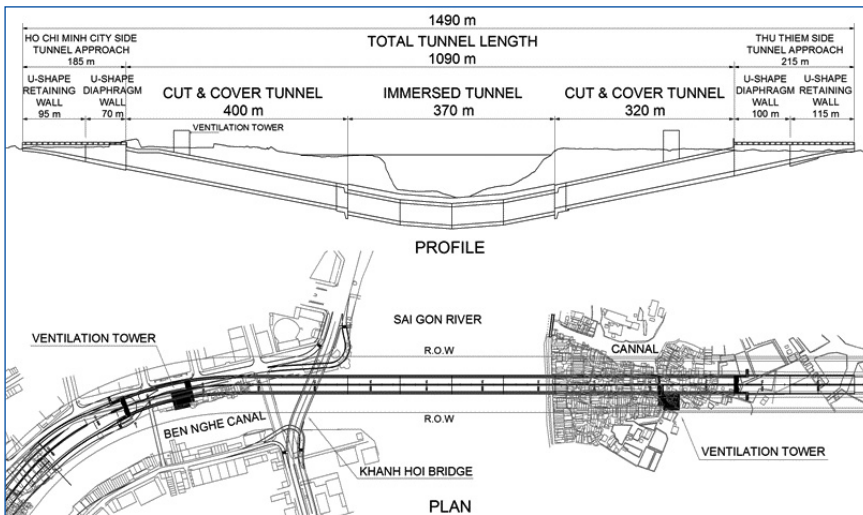
The contract consisted of the construction of more than

CLIENT:	EAST-WEST HIGHWAY AND WATER ENVIRONMENT PROJECT MANAGEMENT UNIT OF HO CHI MINH
MAIN CONTRACTOR:	OBUYASHI CORPORATION
ENGINEER:	PACIFIC CONSULTANTS INTERNATIONAL
SUBCONTRACTOR:	BACHY SOLETANCHE VIETNAM
PERIOD OF WORKS:	NOVEMBER 2005 - SEPTEMBER 2006

MAIN QUANTITIES:

- 1m thick diaphragm wall : 11,870m²
- 1,2m thick diaphragm wall : 55,139m²
- Barrettes piles : 82 units





Cross section view of the tunnel and map

7,000m² of diaphragm wall and barrettes, both going down to approximately 33m.

In order to maintain traffic flow and allow the realisation of adjacent works on the Ben Nghe Canal, the project was carried out in 3 stages, on a night and day shift basis.

Stage 1: The diaphragm wall and barrettes works were started on the Ho Chi Minh side, to allow the necessary diversions of the roads and bridges.

Stage 2: All the equipment was transferred by barge over the Saigon river to the Thu Thiem side to carry out the diaphragm wall and barrettes works.

Stage 3: The equipment was transferred back to Ho Chi Minh side to finish the works started during the first phase.

The diaphragm wall and barrettes were constructed together with the guide walls and over 8,000 tonnes of reinforcement cut, bend and fix, leading at one time during the project to a collective workforce of over 400.

A KS grab was equipped with 5.0 x 0.8m jaw specially constructed for this job, to permit the excavation of 5m barrettes in one bite.



Diaphragm wall with struts on Thu Thiem side



The grab with 5m opening specially built for the project



The Thu Thiem site team

