Project identification
North/South Line Amsterdam

Type of project
Metro

Client
Municipality of Amsterdam

In co-operation with

Project assignment
Feasibility study, preliminary design, final design, tender design, tender documentation and evaluation, detailed design and contract management & supervision

Country
The Netherlands

Location
Amsterdam

Project duration
1994-ongoing

Project phase
all project phases

Construction cost
€ 3.000.000.000,= (excl. VAT)

Consultancy fee
more than € 200.000.000,= (excl. VAT)
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Project description
One of the most challenging international metro projects of the last decade is the North/South Metro Line in Amsterdam. To relieve the existing public transport system (bus, tram, metro and ferry lines) in and around Amsterdam, the existing metro system will be complemented by an additional 5th line, the North-South line. The new line is expected to provide transport for approximately 200,000 people a day. The 1st part of the line extends from the A10 ring road in Amsterdam North to the A10 ring road in Amsterdam South and has a length of 9.5-km. In a later stage, the line may be extended to the north, in the direction of Zaandam and to the south, in the direction of Schiphol International Airport.

The line will be realised on ground level in the southern and northern parts, by way of an immersed tunnel where it crosses the river IJ, and by means of a 3.4-km long double tube bored tunnel to cross the old city centre. Several sections of the metro line will be made by applying the conventional cut-and-cover technique, as well as by the less frequently used caisson-technique. Of the new stations that make up the North-South line, three will be realised on ground level, one underground beneath an existing historic railway station, three deep underground stations will be constructed in the city centre, and one underground station at a relatively shallow depth. An innovative design approach containing special construction techniques was required, especially for the bored tunnel sections and the four stations in the city centre.

Scope of work
As the Lead Consultant for the Client, the Municipality of Amsterdam, the TEC partners were responsible for the integral design. During the initial stages, the Reference Design was developed, followed by the pre-design, final and detailed designs, drawings and technical specifications, tender documents, consultancy regarding the contracting strategy, contract administration, construction supervision, as well as the preparation of procedures and guidelines for project monitoring, assistance with the public consultation and permit process, risk management, construction safety and environmental issues.

The project is described in more detail in the sub sheets:
1. Immersed tunnel IJ river crossing
2. Metro Station Central Station
3. Immersed tunnel under historic railway station
4. Pneumatic Caissons for running tunnel section and launching shaft bored tunnel
5. Bored Tunnel
6. Rokin Station
7. Vijzelgracht Station
8. Ceintuurbaan Station
9. Europaplein Station
10. Monitoring and mitigating measures
11. M&E Installations