



Nanjing Metro Line 2, China

Nanjing is the capital city of Jiangsu Province with a population of more than 8 million.

The Nanjing Metro currently has two lines: Line 1 and Line 2 operated by the Nanjing Metro Company. Line 1 and 2 are operational and Line 3, 4, 6 and 10 are all under construction to be ready by 2014 for the Second Youth Olympic Games to be held in Nanjing.

Line 1 became operational in September 2005 after five years of construction. In May 2010, the south extension of Line 1 and the new metro Line 2 became operational. Line 2 was constructed in 36 months and has been designed to serve 500,000 passengers a day.

Line 3 broke ground in January 2010. The 14.4km extension to Line 1 westwards across the Yangtze River is also underway and will have eight new stations.

Nanjing currently has 85km of metro rail network, with plans to increase this to 600km - comprising 17 rail lines - by 2030.

Evans & Peck's role

Evans & Peck has provided Nanjing Metro with geotechnical risk control during tunnelling. We were initially approached to analyse the situation and advised them on preventative strategies after a tunnel collapse.

On completion of the line, we were engaged by Nanjing Metro Corporation to provide advice on a communications based train control (CBTC) system commissioning strategy and assistance in CBTC commissioning.

Services included:

- Risk assessment and management
- Failure Mode Analysis & Prediction
- System Interface management
- Test plan assessment
- Test and commissioning support
- Witnessing critical testing procedures
- Technical consulting and support

Working with rail technical experts from parent company WorleyParsons, Evans & Peck reviewed the approach to the project, submitting its operational readiness report to a peer review group which consisted of rail experts from Beijing Metro, Shanghai Metro and Guangzhou Metro.

Since the line opened in May 2010, Evans & Peck has completed a reliability assessment of the line's operation since it has opened - how well the system works and how reliable the system is.

Results

On Nanjing Line 2, the commissioning time available was only 3 months, compared to the eight to nine months normally required for wireless train control systems. With our help, the client has achieved a record time in commissioning a complex metro rail system which involved cutting edge technology.

In July 2010 Evans & Peck signed a memorandum of understanding with Nanjing Metro Consulting Company to provide consulting services to other cities across China developing metros. Around 2,000 kilometres of metro is planned.

Nanjing Metro Consulting Company is a wholly owned subsidiary of Nanjing Metro Company, who is one of the leading metro companies in China. Apart from consulting to their parent company, Nanjing Metro Consulting Company also provides services to other cities.

FACTS AND FIGURES

Client: Nanjing Metro Company

Project value: RMB 17.5 billion

E&P involvement: 2009 - 2010

Their operational experience combined with Evans & Peck's capabilities in world's best practices offers a unique value proposition and a very good competitive edge in China. We are already working together on providing planning and commissioning advice on the Wuxi Metro.

Providing risk management and commissioning advice for Nanjing Metro line 2

