

Kuala Lumpur Light Rail Transit System



Location:

Kuala Lumpur, Malaysia

Client:

Projek Usahasawa Transit
Ringan Automatik, Sdn Bhd
(PUTRA)

Scope of Services:

Project Management

Project Duration:

1994-1999

Total Installed Cost:

\$1.85 billion

Significant Features/ Accomplishments

- New 18-mile (30km) system with 24 stations
- One of the largest fast-track rail projects of any kind
- Successful technology transfer program for 287-person company
- Phase 1 completed ahead of schedule, on budget; Phase 2 completed on schedule, on budget




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The \$1.85 billion Kuala Lumpur Light Rail Transit (LRT) Project is one of the largest rail projects to be built on a fast-track schedule, and is part of Vision 2020, Malaysia's plan for a fully developed economy by the year 2020. The system links the eastern and western suburbs with the downtown business district of Kuala Lumpur. It uses fully automated driverless technology and is the world's largest transit system to use the linear induction motor system.

The project includes 24 stations, of these 17 are elevated, 2 are at-grade and 5 are underground. Approximately 15 miles (24.2 kilometers) of concrete box girder viaduct structures traverse through densely populated suburban and urban areas. Two parallel tunnels run under the center of city with a 3-mile (5-kilometer) tunnel segment running directly under and parallel to, a river. Where the alignment transitions from aerial to underground, top-down construction was used in the bank of a river subject to monsoon flooding.

Top-down construction was also completed for the underground Benteng Station that was immediately adjacent and below a 20-story reinforced concrete frame building. The project also included relocation of a major (275/132 kV) transmission line for the national electric utility and provision of all traction power facilities for the light rail system.

Bechtel provided programme management and extensive technology transfer, Working as part of Pengurusan Light Rail Transit (PLRT) with the overall leadership, training, and management of a 287-person integrated project management company. Bechtel provided a project



director and senior managers who were paired with Malaysian counterparts to lead and manage each of PLRT's five functional groups: project controls, facilities engineering, systems engineering, construction management, and contracts management. Teams worked side-by-side to bring forward the most productive solutions for this fast-track project. At the completion of Phase 1, a transition plan was developed for an orderly transfer of responsibility from Bechtel to PLRT, and the PLRT team completed Phase 2.