

- SYSTEMS DESIGN
- OPERATION DESIGN
- ROLLING STOCK
- UNDERGROUND STATION
- FUNCTIONAL DESIGN
- DEPOT AND WORKSHOP
- PROJECT MANAGEMENT

The challenge

The Jerusalem LRT consists of the so-called "Red Line" of 14 km which entered into commercial service in August 2011.

During the construction phase of the Red Line and the Preliminary Design of its extensions in 2008, JTMT issued a tender for the design of two additional LRT Lines, the Blue and Green Lines, representing the reference scenario of the Jerusalem Mass Transit Network, deriving from scenario analyses and comparisons performed over the last decade.

SYSTRA, in Joint Venture with local partners DEL and MATI, won the design package of the Blue Line that comprises the Preliminary Design of the line as well as support to the Client in the Statutory Process that will take place after completion of the Preliminary Design.

The contract was signed in November 2011, but the bid also comprised an optional assignment for the detailed design that will be performed if the Client decides to prepare a Build Only tender.



Existing Line - Red line

The line is a branched line of about 18 km, with a common section of 6 km and two branches of 6 km, crossing the existing LRT line in the heart of the city and serving a large variety of urban fabrics. An underground section of 1 to 3 km is planned.

There are about 33 stops – the exact number is still under decision – one or two of them with underground options.

For interoperability reasons with the existing line, the rolling stock would be constituted of double trams of 32.5 m fitting to 70 m stations. Rolling stock size is estimated at 39 double trams.

The price estimation of the project is part of the assignment and can at this stage only be roughly assessed with ratios.



Existing Line - Red line



Existing Line - Red line



Existing Line - Red line

SYSTRA's role

During the preliminary Design, SYSTRA was in charge of:

- project / process management,
- quality control,
- works schedule,
- investment cost estimate,
- tender documents
- preliminary engineering design in the following disciplines
 - LRT Urban Integration,
 - Mechanical and Electrical: Track system, Power Supply, OCS, Signaling, SCADA, Fare Collection, low voltage,
 - Substation layout,
 - Rolling stock,
 - Depot / Workshop,
 - Operating principles.

AT A GLANCE

CARACTERISTICS OF THE LINE

Length: 18 km
 1 common section: 6 km
 2 branches of 6 km,
 Stops: 33 - the exact number is still under decision
 Rolling stock: estimated at 39 double trams.

STAKEHOLDERS

DEL Engineering Ltd (ISR)

MATI Jerusalem Transportation Systems Ltd (ISR)

KEY DATES

September 2008: tender
 December 2012: preliminary Design
 2015: expected delivery of Detailed Design