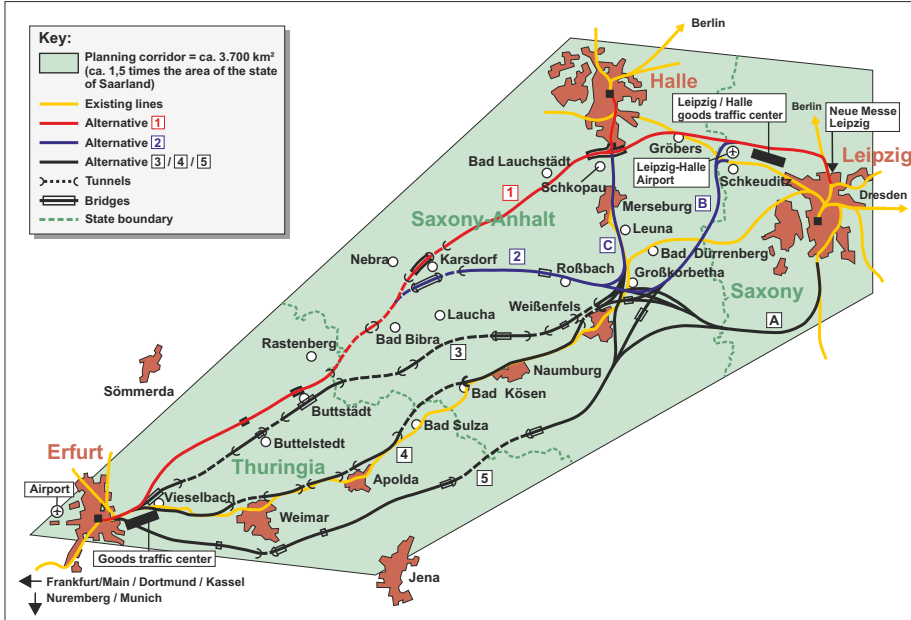


Overall planning New Erfurt - Leipzig/Halle railway line



Overview of the main alternative routes

General information

The new Erfurt - Leipzig / Halle railway line, German Unity Railway Project No. 8.2, is part of the 1992 Federal Traffic Infrastructure Plan. It forms an important section of the long-distance Munich - Berlin and Frankfurt - Dresden connections.

The new line, which passes through the federal states of Thuringia, Saxony-Anhalt and Saxony, has a total length of 128 km. Its realization shortens the journey time from Erfurt to Leipzig from 77 to 39 minutes, and from Erfurt to Halle from 83 to 31 minutes.

The line will be used for both passenger and goods traffic.

From the first studies of alternative routings through the public hearings on land use in the three federal states involved right up to the outline design planning, the entire section was designed and directed by Krebs und Kiefer, with the exception of the stations in Erfurt, Leipzig and Halle.



ICE train at the main station in Leipzig

In the subsequent planning phases, the section from km 6.8 east of Erfurt to km 88.4 near the fork in the line south of Halle was also planned by Krebs und Kiefer.

As well as the open track with many structures (bridges/underpasses) for traffic routes crossing the line, the line includes 6 viaducts with a total length of 13.4 km and 3 tunnels constructed using mining techniques with a total length of 15.4 km.

A new electricity supply line with several substations provides power for the railway line.

Owner

Deutsche Bahn AG

Client

DB ProjektBau GmbH, originally Planungs-gesellschaft Bahnba Deutsche Einheit (PBDE)

Overall planner

Krebs und Kiefer

Processing time

1991 - 2007

Construction costs

(total for new line)

Ca. 2.3 billion EUR

Project data

- Two-track high-performance line
- Gauge: 1,435 mm
- Electrification: 16.7 Hz; 15,000 Volt
- Length of line: 128.0 km
- Total length of structures:
 - Tunnels: 15.4 km
 - Viaducts: 13.4 km
- Designed speed: 300 km/h



Position of the section between the new and / or improved Nuremberg - Berlin and Frankfurt/Main - Dresden connections

Overall planning

New Erfurt - Leipzig/Halle railway line

Planning procedure

An analysis of the sensitivity of land use was carried out in an extensive planning corridor of 3,700 km² between Erfurt and Leipzig/Halle to select possible alternative routes. By using the available maps and evaluating satellite information, the existing land use situation and existing structures were studied on a large-scale basis over the entire area.

As a result, 5 possible alternative routes with variations for the connections with the junction stations were developed as part of the preliminary planning process; these were studied and evaluated with regard to construction technology, railway operations, environmental aspects and cost considerations.

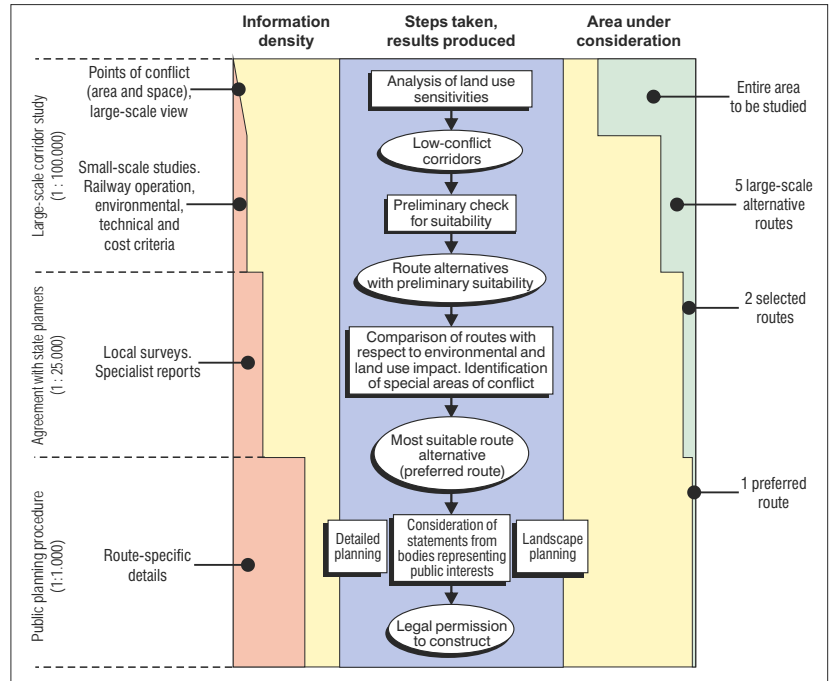
For each of the most favorable alternative routes (1 and 2), basic technical plans on scales of 1 : 25.000 to 1 : 10.000 were produced, comparing the environmental and land use aspects in detail. The documents were submitted to the federal states of Thuringia, Saxony-Anhalt and Saxony for agreement with each of the state planning departments.

Each of the states then carried out a land use planning procedure, and as a final result the northerly route, alternative 1, was chosen for the next stages of planning.

To provide a basis for further detailed technical planning, aerial photos of the selected route corridor were made and evaluated using photogrammetry to produce a digital model of the terrain.

An outline drawing of the entire section was produced to the scale of 1 : 5.000 in accordance with the provisions of the land use planning procedures. In parallel with this, subsoil exploration measures were carried out and expert reports on geology, hydrogeology and hydrology were produced.

In-depth environmental impact studies were carried out, and expert reports on noise and vibrations, landscape planning and a large number of other subjects were



Representation of the overall planning method

re produced and evaluated. Project-related public relations work was intensified.

Based on the boundaries of administrative districts, 14 subsections for public planning purposes were identified and the documents for legal authorization of the plans were prepared. Authorization for the entire section was achieved when the last public planning procedure was completed in July 1996.

Design planning and part of tender planning were carried out in parallel with the public planning procedures. The entire section was divided into track, tunnel and viaduct construction lots, subdivided according to the construction techniques required and the investment involved in the contracts. Design planning was completed in 1998. For some areas, updates to meet changed regulations were made from 2003 onwards.

Construction is taking place in subsections which can be used independently, starting with the Gröbers - Leipzig section which was put into operation in June 2003.

Krebs und Kiefer services

- Decision-making study with selection of routing
- Basic planning
- Public land use planning
- Outline design planning
- Authorization planning
- Preliminary design
- Tender design and documents
- Planning for traffic facilities
- Planning for civil engineering structures
- Structural design
- Land survey planning
- Equipment planning*
- Energy supply planning*
- Environmental impact study*
- Landscape planning*
- Technical studies of noise and vibrations*
- Support for authorization procedures
- Cost and time schedule planning
- Public relations work

*) by specialist planners on behalf of Krebs und Kiefer