2. Main Line Munich – Marienhof Stop – VE41









SHORT DESCRIPTION

The major project “Munich S-Bahn Main Line Phase 2” consists of the following sub-projects: “Above-Ground Sections,” “Intracity Section/Tunnel,” and “Network Expansion Measures” in the outer branches.

THE PROJECT

As part of the **Marienhof construction project**, the central access structure will be constructed using the diaphragm wall-cap method. The preliminary excavation level, approximately 3 m below ground level, will be created in advance using a back-anchored sheet pile wall as excavation support. From this level, the diaphragm walls and primary supports for the temporary load transfer of the floor slabs will be constructed. Once the concrete pour for the barrier floor slab is complete, excavation of the individual levels will begin continuously from top to bottom, protected by extensive dewatering measures. Openings in the slabs will remain in place to ensure utility supply and waste disposal.

Due to the existing buildings surrounding the excavation pit, the underlying platforms will be excavated using mining methods under compressed air. Extensive compensation grouting measures will be carried out to protect the surrounding buildings, utility lines, and subway structures.

To connect the distribution level with the platform levels of the U3/U6 subway station, tunnels are planned to be constructed using mining methods under compressed air. Starting from the central access structure, the connecting tunnel will pass under the Marienhof exit of the U3/U6 subway lines and connect to the platforms of the U3/U6 lines via two existing shafts.

Once the construction pit has been fully excavated, the 5-part tunnel cross-sections—each 65 m long and extending in an east-west direction—will be driven; these will accommodate the escape tunnels on the outer sides and the central tunnel with adjacent platform tubes. At both ends of the platform tunnels, the emergency stairwells will be constructed, as well as the lean concrete blocks for the entry of the tunnel boring machines from the adjacent eastern and western lots.

Press Release

SERVICES IN DETAIL

- Tunnel Construction, Specialized Civil Engineering, Civil Engineering
- Construction method
- Excavation
- Diaphragm wall, L = 300 m, d = 1.5 m, T = 54 m
- Primary supports, Ø = 1.8 m, L = 72 m
- Station
- Floor slabs, d = 1.20–1.50 m
- Cross-sectional area of platform tunnels: 430 m^2

CHALLENGES

The inner-city traffic situation in the Marienhof area—with heavy foot traffic, cyclists, and resident and delivery traffic—poses significant logistical challenges. The sensitive development in the vicinity of the construction site requires careful construction methods, including sophisticated monitoring systems and corrective measures in the event of any deformation.

FURTHER INFORMATION

- Total construction cost under the contract for work: 394.7 million EUR
- Construction cost for billing purposes: Project currently underway
- Purpose: S-Bahn station
- Scope of work: Structural work on the station, including tunnel excavation using mining techniques
- Construction method: Cover construction with diaphragm wall enclosure and primary supports protected by dewatering; tunnels constructed using shotcrete under compressed air
- Main Facilities + Features: Central access structure and platform tunnels, as well as a connecting tunnel to the subway; extensive dewatering and geomonitoring measures, as well as compensation grouting measures

- Geology: Alternating layers of Tertiary sand and marl
- Detailed Design/Construction Supervision:
    - Consortium of SSF Ingenieure AG, atelier4dArchitektenPart GmbH, and ILF Consulting Engineers Austria GmbH
    - Engineering Consortium for Construction Supervision of the 2nd S-Bahn Main Line: Arcadis Germany GmbH, Bernard Ingenieure ZT GmbH, Geoconsult Deutschland GmbH, FCP-Fritsch, Chiari & Partner ZT GmbH
- Key Contacts:
    - DB Netz AG, Southern Regional Division
      Major Project: 2nd Munich S-Bahn Main Line

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- Name of the Joint Venture: Arbeitsgemeinschaft Marienhof
- Consortium Partners (Executing Consortium):
  - Technical Management: Implenia Civil Engineering GmbH, represented by TUN DE-AT
  - Commercial Management: Hochtief Infrastructure GmbH
  - Additional Partner: Implenia Civil Engineering GmbH, ICS NL Munich
- Role of the contractor in the joint venture: Technical Management (TGF)
- Share in the joint venture: 50%
- Implenia on the construction site:
  - Marienhof Consortium
    Irschenhauser Straße 16
    81379 Munich

FACTS

Location	München , Germany
Status	Under construction
Construction volume (value of our services)	395 M EUR
Start of construction	January 2019
Completion	March 2032
Building owner	DB InfraGO AG
Planning	Ingenieurgemeinschaft –Technische Planung Ausführungsplanung SSF Ingenieure AG atelier4dArchitektenPart GmbB iLF Consulting Engineers Austria GmbH
ARGE	✓
Other tunnelling	✓

SERVICES

- Tunnelling
- Transport tunnels
- Service tunnels
- Special Foundations
- Civil engineering
- Concrete construction
- Urban transport infrastructure
- Rail transport infrastructure
- Structural engineering
- Infrastructure