



Railway and road tunnels

Untertürkheimer Kurve railway tunnel for Stuttgart 21 (Lot 2A)

Data and facts

Company	Arge PORR GmbH & Co. KGaA / PORR Bau GmbH
Type	Tunneling
Runtime	08.2012 - 08.2021
Principal	DB Netz AG, represented by DB Projekt Stuttgart-Ulm GmbH

[Project report online](#)

Three buildings for Untertürkheimer Kurve

The open-cut tunnel and the trough with emergency services access are part of project approval section 1.6a of the Stuttgart 21 railway project. PFA 1.6a branches off from the Filder Tunnel shortly after the future Stuttgart main station and runs for a total of around 5.7 kilometres to Obertürkheim. At the Wangen branch structure, the tunnel branches off in the direction of Untertürkheim and the future railway yard.

Cooled fresh concrete processed just-in-time

PORR Spezialtiefbau produced the sheet pile walls and bored piles. Dewatering, auxiliary bridges, draining and traffic facilities near tracks, track construction, overhead line construction and railway system installations were also part of the project.

Due to the technical requirements, particular attention was paid to the correct tempering of the concrete on hot days. As the temperature of the fresh concrete was not allowed to exceed 25 °C on the construction site, the concretes had to be cooled extensively with nitrogen. Just-in-time logistics also proved to be a real challenge as the concrete had to be processed immediately and the only access point was the emergency structure built in 2016. The recipes for the concretes used were specifically created for this project in close collaboration with PORR's concrete specialists. The slow heat and strength development of these concretes mean that it was possible to reduce stresses and thus cracks in the structure.

The tunnel and trough structures were completed in October 2020, with the emergency access structure being completed in 2016. In August 2021, PORR handed the completed structures over to the finishing teams after nine years of construction time.

After completion of the tunnel and trough structures in Untertürkheim, PORR is still involved in the Filder and Ober-/Untertürkheim tunnel projects as part of a consortium for the Stuttgart 21 project.

Impressions



Image notes

1

Railway tunnel, Untertürkheimer

View of the 480-metre-long construction section.

2

Railway tunnel, Untertürkheimer

Work areas are filled with liquid soil.

3

Railway tunnel, Untertürkheimer

Open tunnel construction, here the cooled concretes were used.

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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