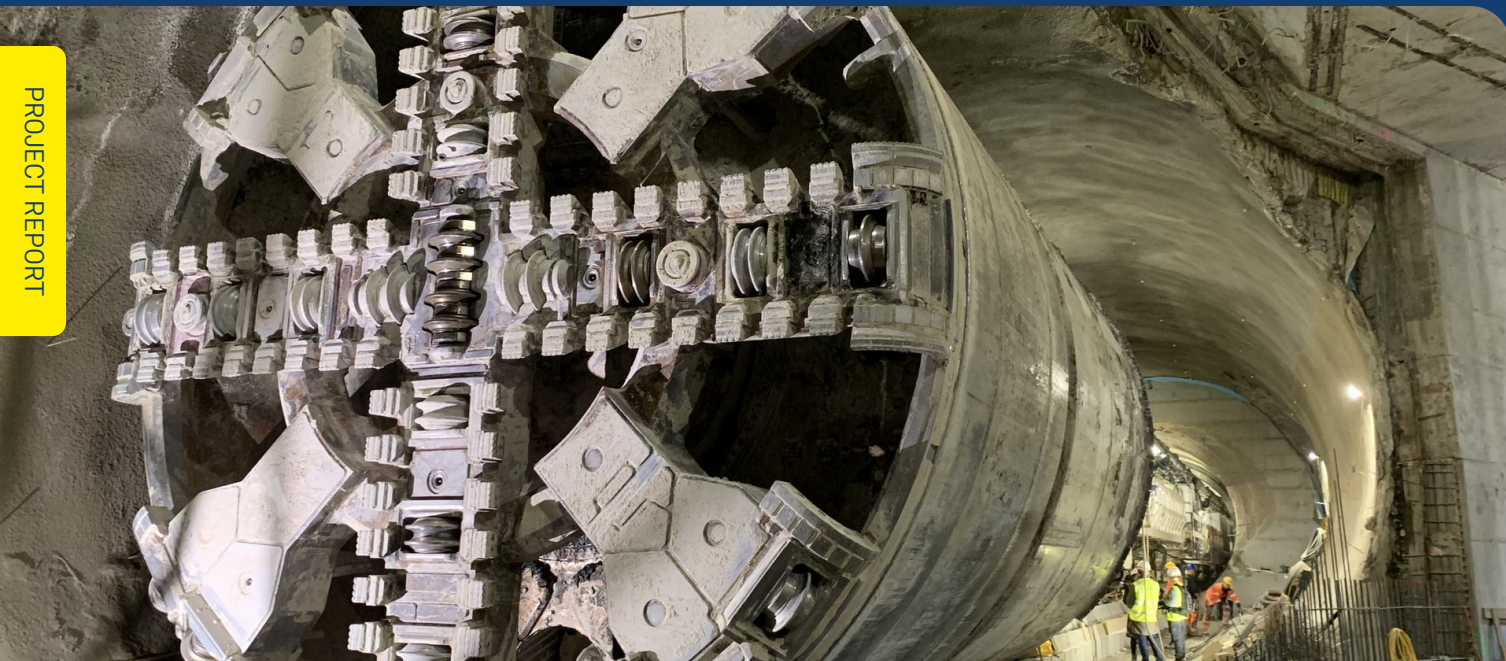




Vienna Underground – U2 17–21

Data and facts

Company	ARGE Porr Bau GmbH – Strabag AG
Type	Tunneling
Runtime	03.2021 - 12.2030
Principal	Wiener Linien

[Project report online](#)

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PORR

The Vienna Underground network continues to expand

By 2030, existing metro lines will be extended, modernised or built from scratch. Revised routes and new sections are also intended to relieve pressure on existing lines and offer the people of Vienna improved mobility throughout the city.

Work has begun on tunnelling for the new U2 underground line at Matzleinsdorfer Platz. The two tunnel sections, each 4 km long, are being constructed using the New Austrian Tunnelling Method (NATM). This involves excavating metre by metre using excavators and securing the tunnel with shotcrete. Ice-freezing boreholes, which were drilled in advance, ensure the stability of the ground.

In parallel with the tunnelling work, the special civil engineering and structural engineering teams are working on the construction of the shafts along the route, enabling continuous tunnelling. The shafts are up to 35 m deep and are being constructed using the top-down method. The excavation is largely secured by means of dissolved bored pile walls with pile lengths of approximately 40 metres and diameters between 90 and 120 cm. The northern shaft in the Matzleinsdorfer Platz area is being constructed using a 120 cm thick diaphragm wall enclosure to a depth of 42 metres.

Once the tunnels in the vicinity of the new U2 stations have been completed, the so-called 'Mole', a shield tunnelling machine, will be deployed. It will tunnel some 4 km beneath Districts 10, 5, 6 and 7, from Matzleinsdorfer Platz to Augustinplatz. This machine was specially designed for this project in Vienna and has a total length of 120 m and an impressive weight of 1,200 t. Once its work is complete, it will have created two U2 tunnel tubes with an excavation diameter of 6.84 m. This is a minimally invasive construction method that causes as little disruption as possible to the surface, traffic and the environment.

To drive the project forward as quickly as possible in this densely built-up, urban environment, the tunnelling team is working 24/7 in shifts. At peak times, up to 500 staff are involved.

In total, this project involves the handling and installation of around 362,000 m³ of concrete, 27,500 tonnes of reinforcement, 652,000 m³ of earthworks and 40,500 running metres of bored piles.

Impressions

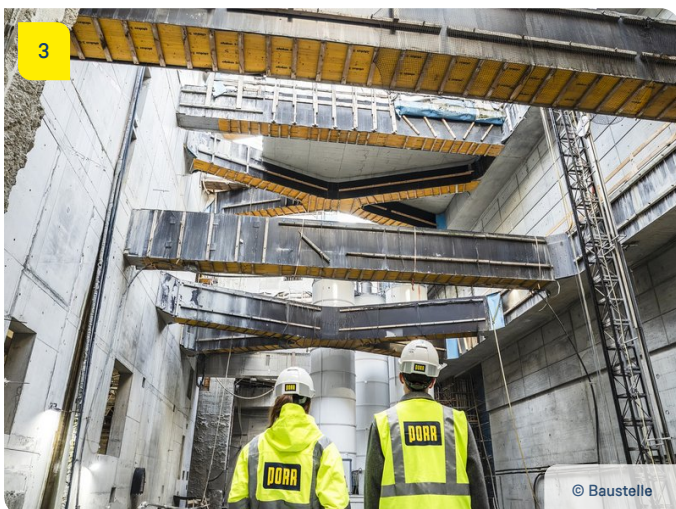
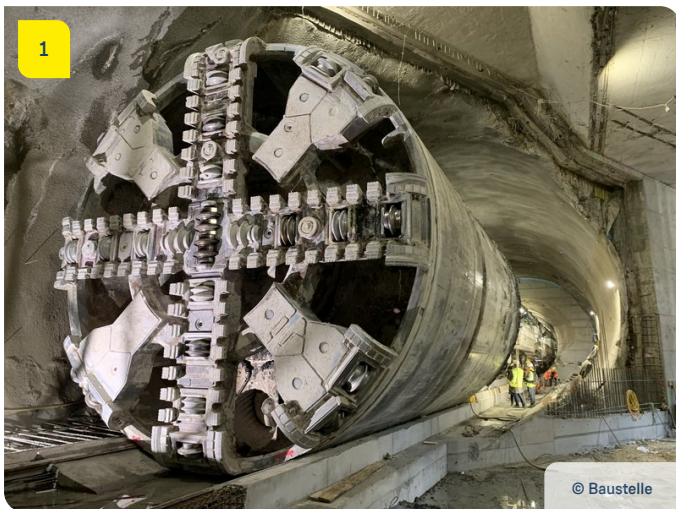


Image notes

1

TVM Track 2

Passing through TVM Pilgramgasse station

© Baustelle

2

Cyclic tunnelling

Tunnelling at the Matzeinsdorfer Platz turning station

© Baustelle

3

Shaft lining

Shaft extension at Matzeinsdorfer Platz station, north shaft

© Baustelle

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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