PROJECT REPORT

Hamburg-Stellingen
Expansion of the A7

Data and facts

Company	PORR Spezialtiefbau Planung GmbH
Type	Planning
Runtime	04.2016 - 02.2021
Principal	HOCHTIEF Infrastructure GmbH

Project report online

www.porr.de

Planning for planning permission and construction of foundations and groundworks

Infrastructure works on the A7

The upgrade of the A7 comprises various measures relating to traffic management and noise protection. The project includes noise barriers, central barriers, noise-reducing road surfaces as well as a noise-protection tunnel. Site-specific ground investigation and foundation design were required for the construction of these structures.

Design of the noise barriers

In the Hamburg-Stellingen section, a total of 20 noise barriers with heights ranging from 4 m to 9 m were designed. The majority of the structures feature cantilevered components. Due to the height of the structures and the resulting loads, pile foundations were specified. The foundations serve to transfer the loads from the structures into the subsoil.

Traffic sign bridges with pile foundations

In addition, 17 traffic sign bridges were designed. The structures support large-scale signage and require appropriate foundations as well as foundation elements. The loads are transferred via pile foundations into the load-bearing soil layers. The design work included the design of the foundations and foundation systems for the various types of structure.

Permit and detailed design

The services provided by PORR special civil engineering planning included the preparation of the permit application documents as well as the detailed design for foundations and pile foundations. The design was tailored to the requirements of the respective structures as well as the constraints of the A7 motorway expansion.

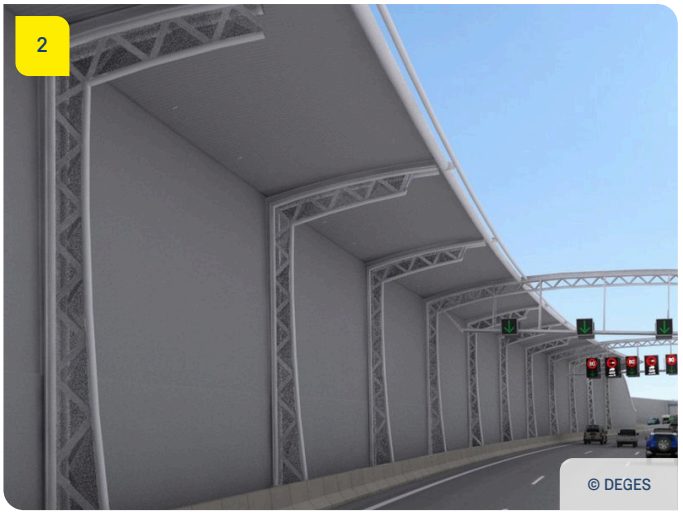
Foundation for noise protection and transport infrastructure

The design of the foundations and piling systems laid the groundwork for the construction of the noise barriers and traffic sign bridges. These design services form the basis for the subsequent construction of the structures on the Hamburg-Stellingen section.

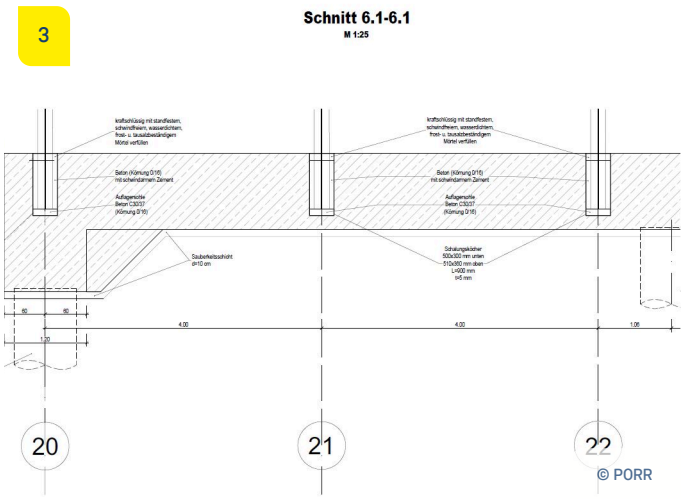
Impressions

1

2



3



4

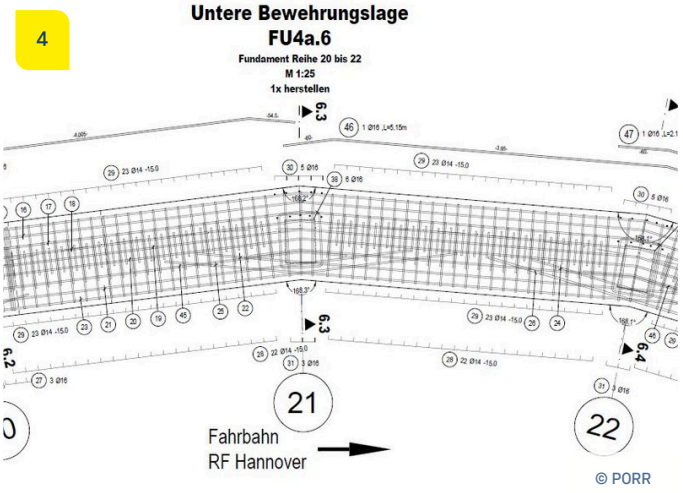


Image notes

1 **Visualization of the noise protection measures**

For the extension of the A7 motorway in Hamburg-Stellingen, the planning department drew up the approval and implementation planning for the foundations of the noise barriers and traffic sign gantries.

© DEGES

2 **Noise barrier cantilevered on one side**

Cantilevered noise barrier on one side.

© DEGES

3 **Torsion beam section**

Picture shows the torsion beam section.

4 **Lower reinforcement layer for foundation**

Lower reinforcement layer for the foundation.

© PORR

© PORR

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

PORR GmbH & Co. KGaA
Walter-Gropius-Straße 23
80807 Munich
T +49 89 71001-0
E-Mail: info@porr.de