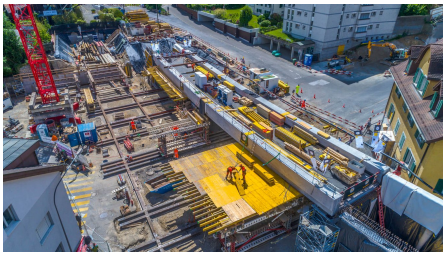
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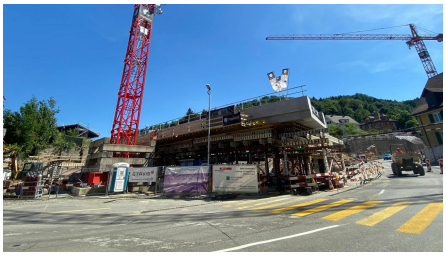
Reference

Ausbau K 268 Mellingerstrasse / Ersatz SBB Brücke B-223









SHORT DESCRIPTION

A complete rehabilitation and road / civil engineering redesign of the nearly 550 m long section of Mellingerstrasse in Baden is being undertaken. The operational optimizations of the heavily trafficked road envisage a concrete traffic circle, which will be located below the SBB bridge. In order to achieve the clearance height required by the standard under the SBB bridge, the existing roadway will be lowered.

THE PROJECT

The existing SBB bridge B-223 will be replaced at the same location by a new structure with a larger span. The new reinforced concrete bridge, which features new, geometrically challenging piers and abutments, will be enclosed by a concrete gyratory. The prestressed bridge slab will be prefabricated on site near the final location on a falsework. Subsequently, the bridge slab, together with the falsework, will be pushed into place 26 m long and 12 m across in a weekend operation. In addition, a steel cycle path footbridge will be attached to the bridge to provide a link across Mellingerstrasse for non-motorized traffic. Furthermore, the technically ambitious and extensive project includes the adaptation of the track including service lines, pavement works and various engineering structures. In order to minimize

the interference with railroad operations, various night-time works and a 9-week closure of the SBB track were necessary.

Extensive work on falsework, special civil engineering, earthworks, utility lines and roads was necessary for the realization of the project.

SERVICES IN DETAIL

- Earthworks, utility line and road construction
- Special civil engineering works (nail wall, etc.)
- Protective and falsework
- In-situ concrete work (including prestressed roadway slab, abutments, piers, retaining walls, etc.)
- Coordination of various subcontractors (falsework, demolition, sealing, etc.)

CHALLENGES

- **Deadlines / construction time**: The entire reconstruction of the SBB bridge on Mellingerstrasse will be completed in around 7 weeks. The road and utility work as well as various retaining walls will be completed over a period of around 4 years until the end of 2023.
- **Work above or directly adjacent to the road traffic:** Prerequisite: Road always double-lane traffic, with DTV > 22°000
- **Detailed coordination of the individual construction phases** with the available track closures on the part of SBB
- **Technically highly demanding bridge construction work:** lateral prefabrication of a prestressed concrete slab, demolition of existing bridge, new construction of piers and abutments, erection of falsework for bridge shifting, steel web assembly on the side of the bridge for pedestrians and cyclists, etc.
- **Technically very complex in-situ and shotcrete work:** two-layer concrete gyratory construction, demolition and new construction of retaining walls, construction of building underpinnings, construction of nail walls, etc.
- **Line construction site Extensive earthworks, works management and road construction** work: Lowering of roadways, construction of new sidewalks, creation of tree pits, excavation work for district heating/district cooling, water and natural gas lines, etc.
- **Restricted space conditions**: always double lane traffic with DTV >22°000 / development / logistics of the construction areas, etc.

SUSTAINABILITY

- Use of personnel from the region
- Use of recycled building materials from demolished concrete of the construction site

FURTHER INFORMATION

- Excavation 10'000^{m3}
- Pavement demolition 9'500^{m2}
- Pavement works 10'500^{m2}
- Concrete works 2'400^{m3}
- Cable conduit blocks 3'000 m
- Formwork 4'800^{m2}
- Shotcrete shoring nail wall 800^{m2}

FACTS

Location	Mellingerstrasse 54, Baden , Switzerland

Status	Under construction
Construction volume (value of our services)	12 M CHF
Start of construction	October 2021
Completion	October 2023
Building owner	Departement Bau, Verkehr und Umwelt, Baden
Construction management	Banziger Partner AG Ivano Conigliaro, Baden
Planning	Generalplaner SGB Arnaldo Clivio, Windisch
Construction management	Banziger Partner AG Ivano Conigliaro, Baden

SERVICES

- Road construction
- Special Foundations
- Bridge construction
- Civil engineering
- Urban transport infrastructure
- Rail transport infrastructure
- Road transport infrastructure