Project Reference for BIM Services

Project Name: BIM carriageway renewal Murterstrasse Ins

Client
BLS Netz AG
Genfergasse 11
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Reference Person
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Contract Amount
CHF 45,000

Contract Period
January - December 2023

Key Personnel

Project management:	David Holdener
Deputy project management:	Michal Rubánko
Surveying:	Christoph Schacht
Inventory modelling:	Jan Sigrist
Building project modelling:	Kevin Schnippkoweit

Project Description

The "Murtenstrasse railway crossing renewal" project of BLS includes various track construction and civil engineering works in a relatively confined space. Approx. 400 metres of ballast track, 50 metres of cable route and 11 metres of slab track were constructed using a track base plate.

As part of a BLS pilot project, the entire perimeter was surveyed in advance using a drone and modelled as a BIM as-built model. Based on this, the construction project model was also created from the planning data. These BIM models served as the basis for various tests relating to the use of BIM on the construction site. This allowed detailed collision checks to be carried out underground before the construction site. The slab book and drainage were automatically derived from the BIM models and made available on the surveying equipment as a basis for the paving work. Project CDE was used for documentation during the construction work and visualisation with augmented reality enabled a direct comparison between the planned and built state.

Objective of the Project
- Building experience and expertise in BIM at BLS
- Hardware and software layout for BLS BIM projects
- Analysing the BLS's existing data basis for BIM projects

Technical Data

Project perimeter of 600 m, two railway crossings, 250 m drainage, specialist models of the carriageway, signalling systems, traction current cable protection and utility lines and surroundings

Special Features
- Connection to the existing DfA data
- Provision of models as IFC and via CDE
- Preparation of use cases with a focus on BIM on the construction site
- Realisation of project CDE trainings

Our Solutions
- Inventory incl. drone flights
- BIM as-built model of railway technology and surroundings
- Planning and modelling of railway technology projects (BIM), construction project phase
- Data preparation for 3D machine control and construction surveying
- Visualisation and Geodata Services

Partner Company

Rosenthaler + Partner AG