



TUNNEL LOVSTAKK

BERGEN (NO)

EMPLOYER

Hordaland fylkeskommune, Bybanen Utbygging

DESIGNER

SWECO, SW-12030 Stockholm

TIME OF COMPLETION

01.2019 – 12.2021

CONTRACT SUM

CHF 98 Mio. (NOK 816 Mio.)

EXECUTION OF THE WORK

Marti Tunnel Ltd.

LEAD COMPANY – TECHNICAL AND COMMERCIAL LEAD

Marti Tunnel Ltd.

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SCOPE OF THE WORKS

The Løvstakktunnel project, construction lot D15, as part of the extension of Bergen's tramway network, comprises the excavation of a 3 km long tramway tunnel with a parallel pedestrian and cycle tunnel (also serves as an evacuation tunnel) and 6 cross passages, 2 x 150 m long caverns as a railway depot, a rock cut for access buildings to the depot as well as extensive outdoor concrete work such as a cut & cover portal structure and numerous retaining wall structures.

Boundary data:

- 3 km double-track tram tunnel with 10 m width, 6 m height over upper edge of the rail, total approx. 233'300 m³.
- Rock outburst
- 3 km evacuation/pedestrian/cycle tunnel with T7,5 SVV standard profile, total approx. 169'700 m³ rock outburst
- 6 cross passages with SVV standard profile T4 and approx. 18 m length, total approx. 8'500 m³ rock excavation
- 2 niches for technical buildings, total approx. 1'500 m³ rock excavation
- Pumping station with basin, total approx. 5'000 m³ rock outburst
- Rock cut for access building with an area of 1'000 m² and a max. height of 16 m
- 2 depot halls with lengths 120-130 m, width of 17 m and height of 8 m, cross section 140 m²
- Access tunnel from the tram tunnel to the depot with a length of approx. 450 m, two branches at each end, cross-section varies between 55 and 180 m²
- Cut & Cover concrete portal with 120 m length
- Several retaining walls up to 7.30 m high
- Reconstruction of the road facilities incl.
- Roundabout on the portal
- Restoration of the landscape facilities

ACTIVITIES

- Conventional blast tunnelling
- Advance injections
- Rock protection using shotcrete, systematic anchoring, spikes and reinforced shotcrete arches
- Surface blasting
- Concrete work

- Earthworks and exterior works
- Road construction
- Project management completely using BIM (Building Information Modeling)

GEOLOGY

- gneiss



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Marti Tunnel AG

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