TUNNEL BUCHRAIN, A14
BUCHRAIN (CH)

EMPLOYER
Canton of Lucerne, CH-6002 Lucerne

DESIGNER
IG ROBU,
Basler & Hofmann AG, CH-6005 Lucerne
Kost + Partner AG, CH-6210 Sursee
Schubiger AG, CH-6003 Lucerne
PlüssMeyerPartner AG, CH6330 Cham

TIME OF COMPLETION
2008 - 2010

CONTRACT SUM
CHF 33.1 Mio.

EXECUTION OF THE WORK
Marti Tunnel AG as subcontractor for ARGE ANRO

CONSORTIUM PARTNERS
Anliker AG, CH-6021 Emmenbrücke
Marti Bauunternehmung AG, CH-6002 Lucerne
Marti Tunnel AG, CH-3302 Moosseedorf
Gebr. Brun AG, CH-6020 Emmenbrücke
Stutz AG, CH-8500 Frauenfeld

LEAD COMPANY
Anliker AG, CH-6021 Emmenbrücke

COMMERCIAL LEAD
Marti Bauunternehmung AG, CH-6002 Lucerne
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SCOPE OF THE WORKS
- New highway connection Buchrain A14 between Emmen Süd and Gisikon-Root
- Access Rontal as a connection between Reusstal and Rontal
- As a part of the access Rontal, the tunnel of Buchrain crosses under the town of Buchrain
- Two-track road tunnel with bi-directional traffic
- Length of the tunnel in conventional excavation method $L = 740$ m
- Emergency stopping bay in the middle of the tunnel
- Safety gallery below the roadway
- Emergency exits into the gallery

ACTIVITIES
- Excavation of a pilot gallery with a tunnel boring machine $D = 3.60$ m
- Excavation of portal section under pipe umbrella, steel arches, shotcrete
- Widening of the pilot tunnel, lowering of the benches and excavation of the trench for the safety gallery using a roadheader
- Rock support with shotcrete, bolts and steel arches, metal installations
- Excavation and rock support of the emergency bay and the emergency exits
- Construction of the safety gallery with precast elements
- Concreting lining and finishing of the tunnel, the emergency bay and the emergency exits