



FLOOD PROTECTION OF THE SARNERAA VALLEY

SARNEN (CH)

EMPLOYER

Canton of Obwalden, CH-6061 Sarnen
Department of Building and Spatial Development
Office for Forest and Landscape
Department Natural Hazards

DESIGNER

of the consortium:
- Gruner AG, CH-4020 Basel
- ewp bucher dillier AG, CH-6005 Luzern

TIME OF COMPLETION

09.2018 – 06.2022

CONTRACT SUM

CHF 79 Mio.

EXECUTION OF THE WORK

ARGE HWS Marti (turnkey project)

CONSORTIUM PARTNERS

Marti Tunnel AG, CH-3302 Moosseedorf
Marti Bauunternehmung AG Lucerne, CH-6002 Lucerne

LEAD COMPANY – TECHNICAL AND COMMERCIAL LEAD

Marti Tunnel AG, CH-3302 Moosseedorf

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SCOPE OF THE WORKS

Sarneraa with flood discharge tunnel east 6.5 km and flood protection Kernmattbach
Vertical shaft Raise Drill 80 m
Two building pits

WORK DESCRIPTION

Turnkey project:

- Construction works as well as project planning (construction project, submitted project (building permit), execution project)

Flood discharge tunnel:

- Tunnel with a 0.2% gradient
- 6.3 km hard rock Gripper-TBM with diameter 6.5 m
- Drill & Blast / mechanical excavation 225 m (start and finish gallery) under sensitive structures (pressure tunnel, railway line),
- Single invert segment (tubbing)
- Rock support including anchors, steel mesh, shotcrete, steel arches
- Inner shell: single layer, shotcrete, without waterproofing layer

Vertical shaft and excavation pit Kernmattbach:

- Excavation pit between stream and steep slope
- Shaft: H = 80 m D = 3.6 m
- Raise drill
- Single-layer shotcrete / in-situ concrete

Excavation pit outlet (starting pit TBM)

- Flood protection dam along river Sarneraa
- Near sensitive development (barrage Wichelsee, pressure tunnel)

GEOLOGY

- Limestone
- Marl
- Schist



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Marti Tunnel AG

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