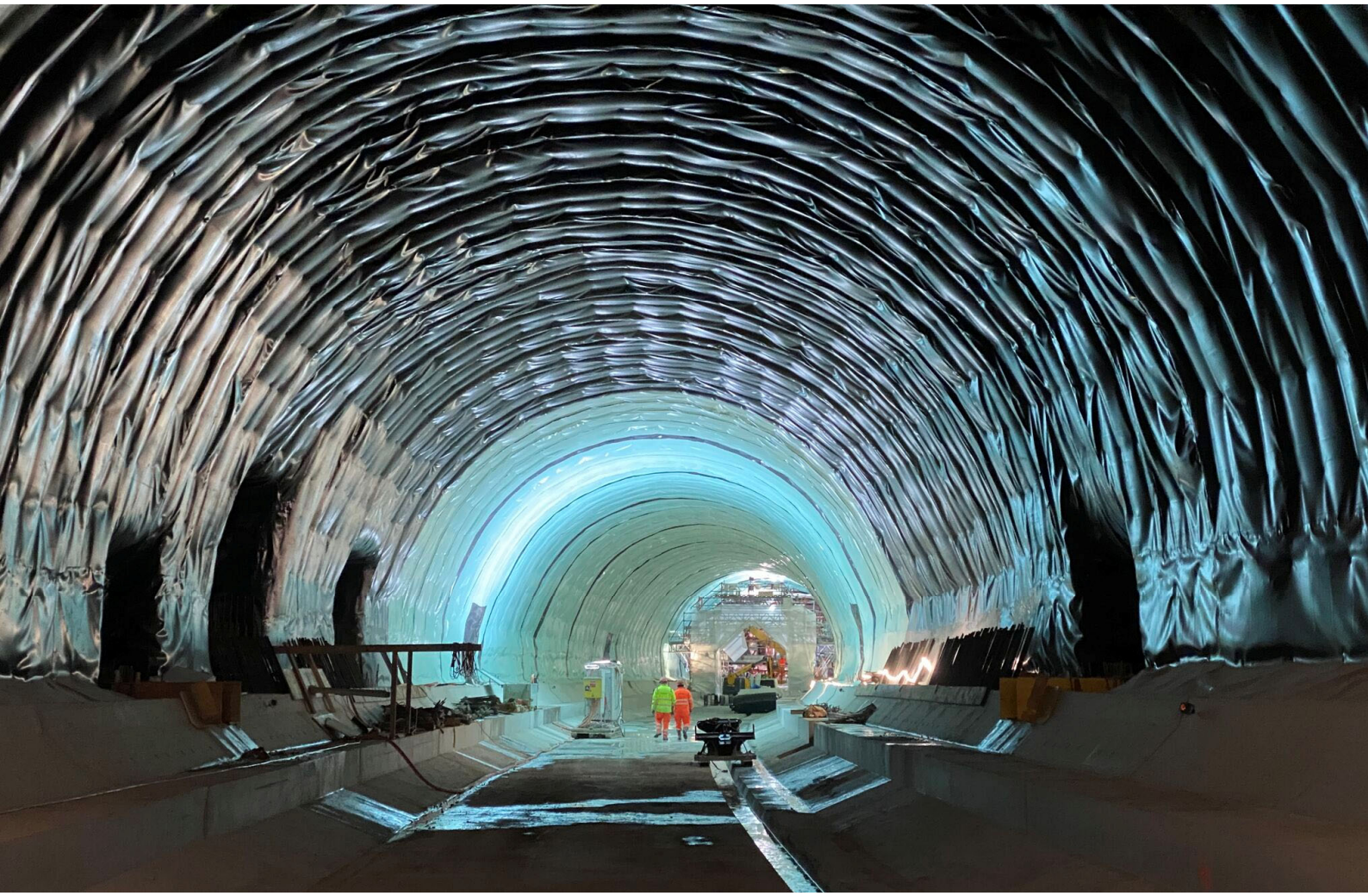


Bypass Cham - Huenenberg (CH)
Waterproofing

Country	Switzerland
Type	Road, Highway
Client	Tiefbauamt, Canton Zug, ASTRA
Main Contractor	ARGE West/Ost UCH, Frutiger AG
Execution of the work	Renesco AG
Designer	Emsch & Berger, Gruner, Amberg Engineering, Amstein + Walter
Construction Period	2025-2026

Renesco Group, Seedorffeldstrasse 21, CH-3302 Moosseedorf, Phone: +41 (0)31 388 74 20
info@renesco.com, www.renesco.com

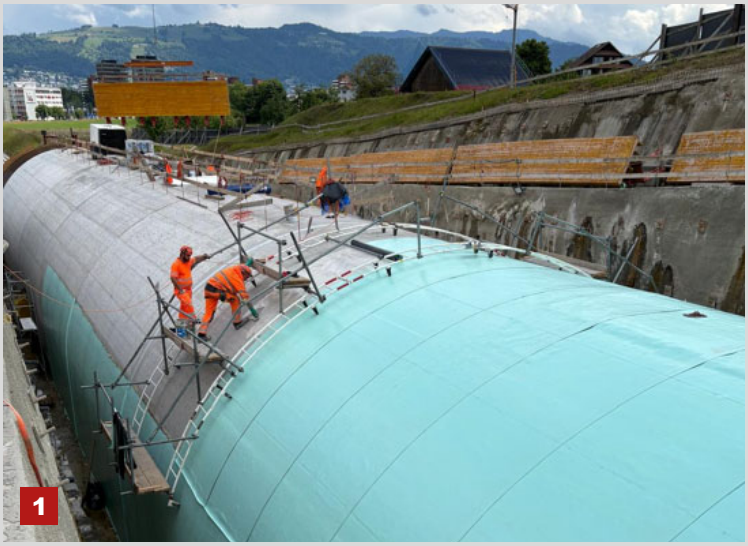
Project Description

The construction of the 5.6-kilometre bypass Cham-Huenenberg (UCH) is the last major piece of the transport planning puzzle in the canton of Zug. Part of the project is the Staedtlerwald tunnel (one-lane) with a total length of 543 meters, 143 meters of which will be constructed in open-cut mining at the two portal areas.

Scope of Service

Supply & Install of the waterproofing system according to SIA 272 (Swiss standard), drained system (umbrella).

- At the mined section (tunnel, niches) a 2 mm thick PVC-P based sheet membrane was installed, together with a drainage/ protection geocomposite/ geotextile and a 2 mm thick PVC protection sheet membrane, including water barriers, BA anchors, terminations and penetrations.
- At the cut & cover sectors a post-applied waterproofing system was installed. The 2 mm thick PVC-P geomembrane was glued over the entire surface of the existing concrete structure with a 2-K-PU based adhesive. This system combines the advantage of flexible sheet waterproofing with the *fully adhered approach characterized by:
  - Thermal-welded seams (no adhesive, approved technology, durable joint quality)
  - Well established flexible geomembranes & properties (prefabricated, dynamic perforation resistance, track records)
  - Prevent lateral water underflow between concrete structure & membrane (system approach)
  - Possibility of substrate inspection & repair before applying the final waterproofing (risk assessment)
  - Substrate levelling (no gravel pockets, integrity of the final waterproofing)
  - Experience >>20 years



1. Cut & Cover section with a fully adhered waterproofing system
2. Tunnel view from inside to the open-cut sector (portal)
3. Inner-Lining Works with reinforcement