

## L 200 BREGENZERWALD ROAD, CONNECTION A 14 / L 190 - SCHWARZACH

Client: Provincial Government of Vorarlberg Development Period: 1989 to 2006

## THE PROJECT \_\_\_\_\_

For a better access to the Bregenzerwald region by traffic from the Rhine Valley, the Bregenzerwald Road (L 200) has been reconstructed over a length of 2 km between the motorway junction Dornbirn North of the A 14 and the Achrain Tunnel.

The level of the road runs in sections up to 1.5 m above the natural top ground surface.

Because of the disadvantageous built-up of the subsoil (deeply reaching, thick peat soil zones and pulpy lacustrine clay), special measures were considered indispensable in order to assure a sufficient stability and to minimize longterm settlements.

## OUR FUNCTION \_\_\_\_\_

BGG was commissioned with the consulting in the fields of geotechnics and hydrogeology during all the planning and construction phases. In the course of the works, subsoil investigations and laboratory analyses were determined, supervised and evaluated. Based on these, soil mechanical and geotechnical expert's reports were prepared.

During implementation, an accompanying consulting in geotechnical and hydrogeological matters was performed. In this connection, the interpretation of the numerous measurements has to be mentioned (determination of the sequences of the fill and the required wait time), which has been crucial for a stable and economically established construction. Special Geotechnical Measures: In order to guarantee a sufficient stability and serviceability in the area of the highly compressible and lowly stable subsoil layers, BGG examined the following special measures:

- Pre-dated overload
- □ Soil exchange
- □ Intensive dynamic compaction
- Light embankment
- Pile founded embankment, moor bridge
- Soil improvement by means of vibro-replacement technique
- Soil improvement by means of sand drains

The results of these examinations were then evaluated by the client, primarily with regard to economy. Eventually, the method of the pre-dated overload in order to forestall the settlements was chosen for the most part of the section. Secondarily, a soil improvement by means of the vibro-replacement technique has been implemented. The settlements resulting from the predated load amounted between 2.0 m and 2.5 m.



Section of pre-dated load (dewatering ditch and geodetic measuring points are visible)