

## Tamina Canyon Crossing, Bad Ragaz, Switzerland

Volkhard ANGELMAIER Executive Officer Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG Stuttgart, Germany volkhard.angelmaier@lapconsult.com



Wolfgang EILZER CEO Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG Stuttgart, Germany wolfgang.eilzer@lap-consult.com



## **Summary**

In 2007 the City of St. Gallen, Switzerland, has announced a public competition for a new bridge across the Tamina Canyon. This paper presents the winning design, informs about the current status of the planning process and gives an outlook on the further steps.

**Keywords:** integral structure, high aesthetic quality, slender concrete arch, inclined piers, extraordinary location.

## 1. Introduction

The Tamina river valley forms the southern tip of the canton of St. Gallen. It is orientated approximately from south to north and ends at the spa town of Bad Ragaz around 500 m above sea level in the alpine Rhine valley. In its lower end the Tamina flows through a deep gorge that separates the higher valley plateaus and their communities from each other.

The Tamina valley belongs to the administrative district of Bad Ragaz with about 1,600 inhabitants. The main community of the valley Pfäfers is located on a plateau on the eastern slope about 300 m above the valley floor. On the western side an internationally renowned rehabilitation center was built in the Valens community. Both valley plateaus are accessible by roads high above the canyon, starting from the center of Bad Ragaz. They win first height with a series of bends in the forested steep slopes of the Rhine Valley and continue from there serving the communities in the higher Tamina valley. The bottom of the gorge can be reached from Ragaz by footpaths along the river reaching the spring close to Valens.

Due to the geological risks, the road in the west to Valens is no longer sufficient to the current and future requirements. For this reason, the communities of Bad Ragaz, Valens and Pfäfers decided in 2005 to work out a preliminary concept for the rehabilitation and maintenance of the Valens street and in comparison the crossing of the Tamina valley with a bridge between Pfäfers and Valens, with the result that a valley-crossing would be the most economical solution. The new road should bypass the village of Pfäfers northwest and lead into the district of Bofel. From Bofel to the district of Berg on the other side of the Tamina valley (Fig. 1) a 400 m long bridge would be spanned, crossing at about 200 meters height above the gorge.