Earthquake resistance (Safety and security)

The significance of the earthquake resistance or seismic performance of new and existing buildings has grown continuously in recent years. In addition to providing classic structural evaluation services and innovative building reinforcement concepts, we develop concepts for handling larger portfolios and assessing earthquake risks in the context of comprehensive risk analyses.

Throughout the past decade, federal and cantonal officials have addressed the various issues relating to the earthquake resistance of federal and cantonal buildings. Their work has led to the development of a three-stage procedure for evaluating the earthquake resistance of a full range of structures. The third stage of the procedure corresponds to a computational assessment issued by the Swiss Society of Engineers and Architects (SIA Technical specifications 2018). We regard the principle of proportionality of the technical specification as very appropriate because it provides a sound basis for effective risk analysis.

With extensive experience and know-how in the various fields of engineering, we provide the following services:

- Risk analysis and the identification of risk-relevant structures at the municipal, cantonal and federal level
- Analysis of building and infrastructure portfolios and the development of procedural strategies
- Qualitative and quantitative analyses of individual buildings, computational verification of the earthquake resistance of existing buildings and the ascertainment of maximum proportional reinforcement costs
- Drafting of smart structural reinforcement concepts that take account of operational, design, material, aesthetic and landmark aspects of the buildings in question

As a reliable partner, we support our clients from the concept-study stage to the management and execution of any on-site structural reinforcement measures.

Thanks to our close cooperation with universities and other research centers, our engagement in standards-setting boards and our commitment to advanced training, we always have immediate access to the latest findings. We take an interdisciplinary approach to our work so as to ensure the provision of holistic and comprehensive risk analyses.