

SEISMIC STABILITY & DEFORMATION

Assessment for Geotechnical Structures



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Dams, retaining structures, embankments, and natural slopes that are located in seismically active areas pose a high risk if not verified for stability and level of deformations under earthquake loads.

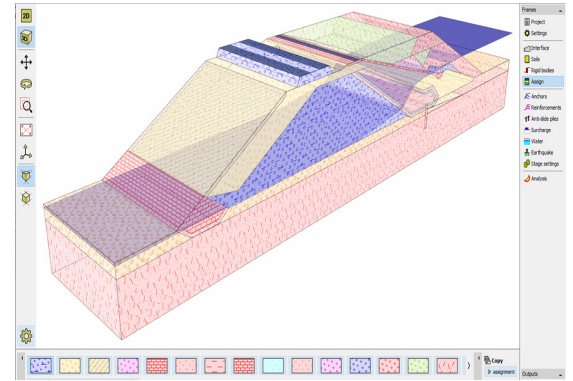
We conduct stability and deformation analyses to evaluate the seismic performance of dams, retaining structures, embankments, and natural slopes.

- Develop an earthquake-resistant design.
- Enable earthquake-related risk and reliability assessments for decision making.
- Take appropriate remedial actions, if needed.

Seismic Stability & Deformation of Geotechnical Structures

STABILITY & DEFORMATION ANALYSES

We use a range of approaches varying from simplified methods to advanced numerical models in accordance with the project-specific needs, to evaluate stability and estimate earthquake-induced deformations, including those related to liquefaction phenomena.



EMBANKMENTS & NATURAL SLOPES

We combine empirical experience with advanced 3D analyses with non-linear constitutive soil models to assess seismic stability and deformation of embankments and natural slopes. We implement seismic monitoring systems that can enable a realistic assessment of risk and reliability for decision making.

DEEP EXCAVATIONS & RETAINING STRUCTURES

We perform analyses to evaluate potential earthquake-induced stability and deformation issues for deep excavations and various types of retaining structures.



REMEDIAL MEASURES

If needed, we provide geotechnical recommendations for corrective measures to improve the seismic performance of these structures.