

Seismic Performance Ratings Update: Frequently Asked Questions

As part of a comprehensive, multi-year effort, the university proactively launched in June 2018 a systemwide initiative to update its seismic performance ratings on buildings within the UC system across California by incorporating the new technology, scientific advances and best practices that have emerged in recent years.

How does the seismic rating scale work?

The university in collaboration with the California Department of General Services and California State University has developed a system of seismic performance ratings. Buildings are assessed for earthquake resiliency and assigned a rating on the following scale:

- I – IV Seismic Safety Policy Compliant
- V Will Require Further Evaluation and, if Confirmed, Must Be Addressed
- VI Priority for Improvement
- VII Unoccupied and Access-Restricted

What is the process to evaluate buildings and assign updated ratings?

In order to make the process of evaluating thousands of buildings manageable, the university has established a methodical approach. Many campuses selected larger, highly utilized buildings as a starting point for the inspections to determine updated seismic performance ratings. A portion of this ratings work was completed in 2019 and initial building assessments will be finished in 2020.

Engineers are conducting inspections following practices recommended by the American Society of Civil Engineers. A first level of assessment involves actions such as visual assessments, review of structural drawings and calculations. Once results of the initial inspections are available, more in-depth reviews may be conducted, if needed, to ensure the accuracy of the rating and facilitate prioritization of seismic work across the system. The additional inspections can involve field tests and computer model simulations to assess potential seismic performance. This extensive process is a priority for the university.

To support this process, in addition to consulting structural engineers, each campus has an assigned Seismic Advisory Board member with seismic expertise to focus on the needs and challenges of their campuses, maintain a comprehensive view of that location's needs and serve as a resource for campus staff.

What is the UC Seismic Advisory Board?

The Seismic Advisory Board (SAB) is a group of independent structural and geotechnical engineers with seismic expertise appointed by the UC Office of the President to provide technical seismic advice to the university. The SAB provides guidance on seismic design, performance ratings and rehabilitation associated with UC's facilities. The SAB's responsibilities include assessing seismic risk, advising on seismic priorities, and providing policy revision recommendations.

Are all structures at all university locations being evaluated?

Building evaluations are being conducted across all university locations with the exception of a number of structures such as small storage buildings, barns and sheds that have no assigned human occupancy. The criteria for exempting a structure from being evaluated and rated were developed on a technical basis by the university's Seismic Advisory Board. This re-evaluation effort does not include hospitals, which are managed under a separate, distinct program.

What are you doing to improve the safety of a building rated VI?

Buildings with confirmed seismic performance ratings of VI are priorities for campuses. The improvements for buildings rated VI could range from minor interventions related to the installation of external reinforcement or structural support, seismic bracing, the wrapping of columns to increase structural integrity, up to full seismic upgrades, or building replacement.

The level of improvements required to enhance the safety of each building will impact decisions to retrofit or replace buildings. Some structural enhancements may not require the relocation of occupants, while other enhancements may require the full relocation of occupants. Each campus, in consultation with the UC Office of the President, as a part of their long-term capital spending plans, will prioritize and plan its retrofitting or replacement work to meet location-specific needs.

What are you doing to improve the safety of a building rated V?

Many of the buildings initially rated at a seismic performance level of V will undergo further structural engineering analysis using more detailed testing methods to more specifically identify the nature of potential seismic performance issues and corrective actions needed. In some cases, buildings initially rated at the V level may receive an improved rating based on the results of the more detailed structural engineering testing and analysis.

For buildings with a confirmed V rating, each campus, in consultation with the UC Office of the President, as a part of its long-term capital spending plan, will prioritize and plan its retrofitting or replacement work to meet location-specific needs. The improvements for buildings rated at the V level could range from minor interventions related to the installation of external reinforcement or structural support, seismic bracing, the wrapping of columns to increase structural integrity, up to full seismic upgrades, or building replacement. Some structural enhancements may not require the relocation of occupants, while other enhancements may require the full relocation of occupants.

What happens if a building is rated VII, or the highest risk level on the scale being used by the university?

The small number of buildings rated at a seismic performance level of VII are already unoccupied, and access to these buildings is restricted. This is in compliance with UC policy, which stipulates that occupants should be relocated from any buildings with this level of rating and the structure posted as dangerous until remedial actions are taken to ensure it meets UC Policy. When a building is rated VII, the campus responsible for the structure would first confirm building occupants have been safely relocated and then create an action plan to address the issues with the building.