



## **Seismic Assessment Guidelines for Portfolio Loans**

Revised 1/2/2012

The written assessment of the loan security is to be addressed and certified to the Lender. No work is to commence until the firm conducting the review has been approved by the Lender. The report is to conform to the current ASTM guidelines and the Lender's protocol. Seismic assessments shall include a review of the structural and seismic characteristics of the property and its improvements and estimate the Probable Maximum Loss (PML)/ or Scenario Upper Loss (SUL) for the building(s) based on the projected worst possible earthquake occurrence. Lender shall receive one hard copy and one electronic copy of the report.

In the performance of the review the engineer shall:

### **I. Building Characteristics**

- A. Evaluate the architectural and structural design drawings in order to make judgments on the potential for the damage ability of the building due to the following building characteristics and design aspects:
- B. Irregularity of the building configuration, symmetry of the lateral load resisting system., discontinuities in the lateral stiffness of a multi-story building, and redundancy of the lateral load system; and
- C. Criteria utilized for the building design, including roof diaphragm construction and the presence of purlin anchorage (if applicable), floor diaphragm construction, exterior and interior wall construction. State any unusual conditions.
- D. The reporting engineer shall visit the site and visually observe the condition of the building and building components, and observe whether risks to equipment and building components have been minimized by appropriate anchoring and/or bracing.

### **II. Site Characteristics**

- A. Evaluate Soils Reports or other soils data made available to determine the in-situ soil conditions and for information on liquefaction, landslide and fault rupture potential.

### **III. Closest Faults**

- A. The ten closest major faults within a 50 mile radius of the subject site, their Richter scale magnitudes and their approximate distance from the site, and their probability of exceedence.

- B. The name of the fault, Richter scale magnitude and distance from the site for the fault which provides the greatest hazard to the property.
- C. The Modified Mercalli Scale intensity for each fault.

IV. **Scenario Upper Loss or Probable Maximum Loss**

- A. The engineer shall estimate the the Scenario Upper Loss (SUL) or the Probable Maximum Loss (PML) associated with the property. The analysis should be based upon a 475-year recurrence interval with a 10% probability of exceedance in a 50-year period.
- B. The Modified Mercalli Scale intensity associated with the SUL or PML.
- C. An opinion on the type of damage that would be associated with the level of the SUL or PML value determined.