
TECHNICAL HANDBOOK FOR
ENVIRONMENTAL HEALTH AND ENGINEERING
VOLUME IV - REAL PROPERTY
PART 33 - LEASING

CHAPTER 33-5 SEISMIC EVALUATIONS OF PROPOSED LEASES

Because of changes in Technical Handbook structure, this chapter, 33-5 has been reassigned as section 2 of Chapter 33-2, July 23-2007

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33-5.1 PURPOSE

The purpose of this chapter is to provide guidance on the seismic requirements for IHS leased space. All proposed leases for buildings or portions of buildings by Federal agencies must have documentation certifying seismic compliance. This includes proposed leases with non-government entities, Tribes, Tribal Organizations or other Government agencies. Additionally, any non-Federally owned building on Federal land must comply with the seismic standards.

33-5.2 DEFINITIONS

Lead Realty Officer (LRO) - The IHS Headquarters designee responsible for carrying out policies and procedures in matters relating to the IHS Realty Program.

Lease Contracting Officer (LCO) - An individual with the requisite training and experience in real property lease transactions that holds a Certificate of Appointment to negotiate real property leases on behalf of the IHS.

Realty Management Officer (RMO) - An individual at the Area Office with the responsibility for the Realty Program.

33-5.3 AUTHORITIES

Earthquake Hazards Reduction Act of 1977 as amended by Public Law 101-614. The Act requires Federal agencies to ensure buildings owned or leased by the Federal Government meet standards for seismic safety.

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Executive Order 12941 of December 1, 1994, "Seismic Safety for Existing Federally Owned or Leased Buildings", adopted standards developed, issued and maintained by Interagency Committee on Seismic Safety in Construction (ICSSC) as the minimum standards for seismic safety.

Executive Order 12699 of January 5, 1990, "Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction". This E.O. makes Federal agencies responsible for ensuring appropriate seismic design and construction standards are met in the construction of new buildings leased for Federal use.

33-5.4 STANDARDS

ICSSC RP 6, "Standards of Seismic Safety for Existing Federally Owned or Leased Buildings" (2002), Replaced ICSSC RP 4. In this text ICSSC RP 6 will be referred to as the *Standards*.

Executive Order 12941 directed Federal agencies to adopt ICSSC RP4 for use in assessing the seismic safety of their owned and leased buildings. ICSSC RP 4 established minimum performance for Federally-owned and leased Buildings. The criteria under ICSSC RP 4 defined levels of performance as Fully Compliant, and Substantially Compliant for Life-Safety.

ICSSC RP 6 allows two levels of seismic performance: a minimum **Life-Safety** level intended to provide a low risk of earthquake induced life safety endangerment and a higher **Immediate Occupancy** level, intended to minimize the risk of earthquake-induced impairment of mission, recommended for critical facilities.

Note: Executive Order 12941 requires the ICSSC to update the *Standards* a minimum of every five years. The next scheduled update is in 2007.

Federal Emergency Management Agency (FEMA) - FEMA 356 Prestandard and Commentary for the Seismic Rehabilitation of Buildings (2000). FEMA 356 includes procedures for evaluation and rehabilitation of buildings for **Life-Safety** and **Immediate Occupancy** performance.

American Society of Civil Engineers (ASCE) - ASCE 31-03 Seismic Evaluation of Existing Buildings. Seismic Evaluation of Existing Buildings (ASCE 31-03), provides a three-tiered process for seismic evaluation of existing buildings in any level of seismicity. Buildings are evaluated to either the Life Safety or Immediate Occupancy performance level. The standard is intended to serve as a nationally applicable tool for design professionals, code officials, and building owners. ASCE 31-03 replaces FEMA 310 Handbook for the Seismic Evaluation of Buildings, A Prestandard (1998).

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33-5.5 REQUIREMENTS

Each LCO, working in conjunction with the respective RMO's and their Facilities Engineering staff, must evaluate all proposed leases for facilities to ensure buildings meet the appropriate performance level of the seismic *Standards*.

Life-Safety is the minimum performance level appropriate for Federal buildings.

Buildings needed to meet agency mission requirements or are considered essential by the agency must meet the **Immediate Occupancy** performance level. The definition of what is "essential" or "mission critical" needs to be determined by each individual agency. Guidance for this determination can be found at Section 1.3.1 of the 2000 Edition, National Earthquake Hazards Reduction Program (NEHRP) Recommended Provisions for Seismic Regulations for New Buildings and Other Structures (FEMA 368). See 33-5.7 of this chapter for more information on essential and mission critical buildings.

The *Standards* apply to all or portions of non-Federally owned buildings leased by the Federal Government, unless exempt under the provisions of Section 1.3 of the *Standards*.

The following provisions shall also apply:

- a. No new leases or lease renewals/extensions shall be made in buildings that do not comply with the *Standards*.

Exception: If no seismically conforming space is available, otherwise acceptable space with the best seismic resistance shall be pursued.

- b. The building owner shall obtain certification by a registered professional engineer that the building conforms to the *Standards*.

The *Standards* shall be applied to all privately-owned buildings located on Federal land. Application of the *Standards* to evaluation and rehabilitation of seismic risks shall be the responsibility of the building owner.

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33-5.6 BUILDINGS EXEMPT FROM THE STANDARDS

Section 1.3 of the *Standards* lists buildings which are exempt from the *Standards*. The list provided below is given for information purposes only as a reference for IHS personnel. Please refer to the *Standards* for a complete listing of exempt buildings.

- Detached one and two-family dwellings located in specific areas of low seismic activity. Refer to the *Standards* section for the seismic values.
- Storage structures that are intended only for incidental human occupancy or that are occupied by persons for a total of less than 2 hours a day.
- One story buildings of steel light frame or wood construction with areas less than 280 m².
- Buildings scheduled for demolition; temporary short-term leases; and foreclosure buildings.
- The remaining useful life of the building or the agency's requirement for the building has been identified as being less than five years.

33-5.7 IHS MISSION CRITICAL AND ESSENTIAL BUILDINGS

The following is provided as guidance in determining whether or not a building is mission critical or essential and if the proposed leased space must be evaluated to the **Life Safety** performance level or the higher **Immediate Occupancy** performance level.

Leased space for administration, storage, quarters and other non-clinical space is not considered essential or mission critical and should be evaluated to the **Life Safety** performance level.

Mission Critical buildings in the IHS are all full service hospitals operating 24 hours per day with inpatient capabilities, emergency services and other functions associated with hospital care. If the IHS were to enter into a lease for a hospital, the lease should require evaluation of the building to ensure it meets the **Immediate Occupancy** performance level.

Buildings are considered to be essential if they are to be used for occupancy or provision of health care in the event of an emergency. Essential buildings include:

- Designated medical facilities with emergency treatment capabilities;

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- Designated emergency preparedness centers;
- Designated emergency operations centers;
- Designated emergency shelters;
- Emergency vehicle garages;
- Designated communication centers; and
- The only health care facility within an 80 kilometer radius.

If the IHS intends to lease a building that will be used for any of the above functions, then the lease should require an evaluation to ensure the building meets the **Immediate Occupancy** performance level.

33-5.8 SITUATIONS REQUIRING EVALUATION AND MITIGATION

Lease terms may be required to be re-evaluated if changes to the structure, occupancy, use or importance are changed. For example if a leased outpatient clinic was considering taking on the additional requirements of being a community designated Emergency Operations Center. The leased building may need to be re-evaluated to ensure it is capable of meeting the **Immediate Occupancy** performance level of an IHS essential building.

At a minimum, a building shall be evaluated and unacceptable risks mitigated when any of the following occur.

- a. A change in the building's function which result in a significant increase in the building's level of use, importance, or occupancy, as determined by the agency.
- b. A project is planned which significantly extends the building's useful life through alterations or repairs which total more than 30% of the replacement value of the facility.
- c. The building or part of the building has been damaged by fire, wind, earthquake, or other cause to the extent that, in the judgment of the agency, significant structural degradation of the building's vertical or lateral load carrying systems may have occurred.
- d. The building is deemed by the agency to be an exceptionally high risk to occupants or the public at large. The term "exceptionally high risk" can vary with agencies but is based upon consideration of one or more of the following factors: (1) seismicity of the building site, (2) structural systems, (3) number of

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occupants, (4) date of construction, (5) number of stories, (6) occupancy type, (7) size (area), (8) structural irregularities, (9) unusual building geometry or characteristics, and (10) importance of building to agency mission.

- e. The building is added to the Federal inventory through purchase or donation after adoption of the *Standards*. (Item "e" is not intended to apply to buildings temporarily under Federal ownership).

33-5.9 COMPLIANCE

A building is considered to be in compliance with the *Standards* if the building:

- a. Is exempt from the *Standards* in accordance with Section 1.3 of the *Standards*.
- b. Is determined by evaluation to be in compliance with the *Standards* in accordance with Section 3.0 of the *Standards*.
- c. When unacceptable seismic risks have been mitigated in accordance with Section 4.0 of the *Standards*.

Compliance with the *Standards* should result in a minimum performance level of **Life-Safety**. In buildings considered essential or mission critical by the agency, evaluation of the buildings and mitigation of seismic risks must meet the higher performance standard of **Immediate Occupancy**.

33-5.10 EVALUATOR QUALIFICATIONS

Registered engineers should be used to evaluate seismic risks for each of the compliance categories for a specific building. The experience and qualifications of the individuals should match the scope and complexity of the assignment. In addition to professional registration it is often necessary to have training and experience in seismic investigations. A specialist in geology or geotechnical engineering should be used for evaluation of foundation deficiencies and geologic site hazards.

33-5.11 APPROVAL

The LRO, in coordination with the HQ Facilities staff, will review each proposed lease to ensure appropriate seismic certification has been included. If concerns about seismic safety can not be resolved, the LRO may request through the Director, Division of Facilities Operations that the lease be rejected.