



City of Portland, Oregon
Bureau of Development Services
Office of the Director

FROM CONCEPT TO CONSTRUCTION

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Proposed Amendments to the Seismic Design Requirements for Existing Buildings

The Bureau of Development Services (BDS) proposes to amend Chapter 24.85 (Seismic Design Requirements for Existing Buildings)

- In 2014, the code referenced by Chapter 24.85, ASCE (American Society of Civil Engineers) 31, was replaced by ASCE 41-13, and ASCE 31 became obsolete.
- In addition, the method of calculating the design of seismic upgrade requirements in the ASCE changed. When taking into account the unique characteristics of the Portland area, the new method results in lower seismic upgrade requirements than the current practice. This is inconsistent with the intent of Chapter 24.85. The intent of Chapter 24.85 has not changed. To maintain consistency with the intent of Chapter 24.85, the proposed changes limits the design and evaluation of existing buildings to 75% of the design values for which new buildings are required to be designed, consistent with the 25% lower force levels than that required for new buildings currently.
- At the request of the Structural Advisory Board the definition of structural systems damaged by catastrophic events should be revised to be consistent with definition for structural systems damaged by an earthquake. Since this Title deals with Lateral Load Resisting Systems of existing structures, instead of the percentage of damage being related to the net area of the building the definition was revised to relate damage to a percentage of the capacity of the existing lateral load resisting system.
- Currently, there is no definition of Occupant Load in Chapter 24.85. This leads to inconsistent methods of calculation of the base number from which seismic upgrade requirements are derived.
- The proposed amendments include:
 - Updating external code references and adding provisions to ensure design requirements for existing buildings effectively maintain the same level of design loads as they do under current practice;
 - Revising the definition of structural systems damaged by catastrophic events to relate damage to a percentage of the capacity of the existing lateral load resisting system.
 - Defining the term Occupant Load to ensure uniform calculation of this base number which triggers the requirement for seismic upgrades; and
 - Adding definitions to previously undefined terms for clarity and ease of use.
- Outreach included:
 - Publication on BDS website;
 - Notification to the Building Owners and Managers Association (BOMA);
 - Notification to the Structural Engineers Association of Oregon (SEAO);
 - Notification and meeting of the City of Portland's Structural Engineering Advisory Board