

Date of Hearing: March 11, 2020

ASSEMBLY COMMITTEE ON HOUSING AND COMMUNITY DEVELOPMENT

David Chiu, Chair

AB 1997 (Nazarian) – As Introduced January 27, 2020

SUBJECT: Building codes: earthquake safety: functional recovery standard

SUMMARY: Requires the California Building Standards Commission (CBSC) to assemble a working group to determine criteria for “functional recovery” standards following a seismic event. Specifically, **this bill:**

- 1) Defines a “functional recovery standard” to mean “a set of enforceable building code provisions and regulations that provide specific design and construction requirements intended to result in a building for which post-earthquake structural and nonstructural capacity are maintained or can be restored to support the basic intended functions of the building’s pre-earthquake use and occupancy within a maximum acceptable time, where the maximum acceptable time might differ for various uses or occupancies.”
- 2) Requires the CBSC, by June 30, 2021, to assemble a “functional recovery working group” comprised of public and private sector entities, including, but not limited to:
 - a) Department of Housing and Community Development (HCD);
 - b) Division of the State Architect;
 - c) Office of the State Fire Marshal;
 - d) Structural Engineers Association of California;
 - e) California building officials;
 - f) members of the insurance industry;
 - g) Building Owners and Managers Association;
 - h) members of the construction industry;
 - i) Earthquake Engineering Research Institute;
 - j) California Council of the American Institute of Architects;
 - k) Association of Bay Area Governments;
 - l) Southern California Association of Governments;
 - m) American Society of Civil Engineers;
 - n) An economic development organization representing a metropolitan region in the state;

- o) Alfred E. Alquist Seismic Safety Commission;
 - p) California Geological Survey;
 - q) International Code Council; and,
 - r) Office of Statewide Health Planning and Development.
- 3) Requires that, not later than June 30, 2023, the working group shall do all of the following:
- a) Consider whether a “functional recovery” standard is warranted for all or some building occupancy classifications;
 - b) Investigate the practical means of implementing that standard either as a mandate or as a voluntary measure;
 - c) If the working group suggests the development of a voluntary or mandatory standard is warranted, it should:
 - i. Advise the appropriate state agencies to propose building standards for consideration by the commission during the next regularly occurring Triennial or Intervening Adoption Cycle, including whether any proposed standards should apply only to certain specified seismic design categories or to the entire state; and
 - ii. Assist in the preparation of an estimated cost of compliance for use by the appropriate state agencies.
- 4) Authorizes the CBSC to adopt regulations based upon the recommendations resulting from the working group for nonresidential occupancies.
- 5) Authorizes HCD to adopt regulations based upon the recommendations resulting from the working group for residential occupancies.

EXISTING LAW:

- 1) Authorizes the CBSC to approve and adopt building standards. Every three years building standards rulemaking is undertaken to revise and update the California Building Standards Code (BSC). (Title 24 of the California Code of Regulations)
- 2) Directs HCD to propose the adoption, amendment, or repeal of building standards to the CBSC for all hotels, motels, lodging houses, apartment houses, and dwellings. (Health & Safety Code Section 17921)
- 3) Allows a governing body, city or county to make modifications to the BSC if they make express findings that such a modification or change is necessary because of local climatic, geological, or topographical conditions. (Health & Safety Code Section 17958.7)

FISCAL EFFECT: Unknown

COMMENTS:

Author's Statement: According to the author, "California has experienced dozens of disastrous earthquakes, which have caused loss of life, injury, and economic loss. The current building code aims to ensure preservation of life in the event of a large earthquake. However, the code does not aim to prevent damage, limiting building closure times, or limiting financial losses. This bill would facilitate the creation of standards for new buildings to make sure they remain functional after an earthquake. New buildings that meet a functional recovery standard would mean people could enter buildings more quickly after a large seismic event, instead of having them closed for months or years at a time.

Background:

Seismic Activity: California is a very seismically active state. It has over 500 active fault lines and contains two-thirds of the nation's earthquake risk. According to the California Geological Survey, the state's estimated annual economic loss from buildings damaged in earthquakes is \$3.7 billion.

Building Code Standard Process: The California Building Standards Law establishes the CBSC and the process for adopting state building standards. Statewide building standards are intended to provide uniformity in building across the state. State law specifies which departments are responsible for developing and proposing building standards. When there is no designated department then the CBSC is responsible. HCD is responsible for single family and multi-family dwellings.

There are a few exemptions, which allow a local governing body, city, or county to modify state building standards. A local governing body, city, or county can adopt an ordinance or a resolution in a public meeting that finds that a local building standard must be modified from the state building standard because of local climatic, geological or topographical conditions and file that ordinance with the CBSC. The CBSC reviews the findings of the ordinance to determine if the local governing body followed the correct procedure.

Functional Recovery Standards: According to the National Institute of Standards and Technology's (NIST) "Research Needs to Support Immediate Occupancy Building Performance Objective Following Natural Hazard Events" study (August 2018), "Rapid recovery or uninterrupted operation of buildings can minimize disruptions to the community, decrease costs associated with repair and rebuilding, and lessen the overall economic burdens on communities and individuals impacted by natural hazards. However, given the range of age and condition of buildings across a community, there are often situations where the built environment does not perform well during natural hazard events.

"Moving towards immediate occupancy (IO) building performance objectives would represent a substantial change from the current design philosophy for commercial and residential buildings, which prioritizes occupant safety and not post-hazard functionality, to a design philosophy that also emphasizes preservation of building function and supports community economic and social objectives. Increasing the performance goals for buildings would not be easily achieved, but the advantages may be substantial. The development of an IO performance objective would require engagement from all levels of society and entail reallocation of existing effort, time, resources and financial investment."

Federal law passed in December 2018 established a committee of experts under the National Earthquake Hazards Reduction Program's auspices to assess and recommend options for improving the built environment in terms of performance goals for post earthquake re-occupancy and functional recovery time. This committee will publish a report by June 2020.

Summary of the Bill: This bill would require the CBSC to convene a functional recovery working group to propose building standards for consideration by the CBSC during the next regularly occurring Triennial or Intervening Adoption Cycle. Specifically, the CBSC would be required to assemble a working group comprised of various state entities and members of the construction, engineering, and insurance industries to investigate and determine criteria for a "functional recovery" standard, as defined, following a seismic event, for all or some building occupancy classifications. The working group would be informed by the results of the National Earthquake Hazards Reduction Program committee report. The working group would direct the CBSC and HCD to propose the appropriate building standards for consideration by the CBSC, and develop an estimate of the cost implications of their adoption. The bill authorizes the CBSC to adopt regulations based upon the recommendations resulting from the working group for nonresidential occupancies, and authorizes HCD to adopt regulations based upon the recommendations resulting from the working group for residential occupancies.

AB 1997 will form a functional recovery working group in California that will consider and build on the recommended options contained in the FEMA report to make specific and timely recommendations based on California's unique earthquake risks and recovery needs.

Arguments in Support: According to the Structural Engineers Association of California (SEAOC), "SEAOC believes that the 'functional recovery' concept at the heart of AB 1997 accurately reflects the expectations that Californians already have for their new structures, even though our current building codes are written to ensure occupants' safety and do not directly address economic recovery. The bill does not mandate an immediate change but merely initiates a process in which key stakeholders can start discussing how to meet those expectations and how to better protect Californians, our economy, and our communities. The discussions will be informed by, and will not duplicate, efforts happening at the federal level."

Arguments in opposition: According to the California Stat Pipe Trades Council, the Council "supports the intent of Assembly Bill 1997, but currently opposes the legislation unless amended to add key stakeholders to the functional recovery working group. In particular, proposed Health and Safety Code section 18941.11 should be amended to add the International Association of Plumbing and Mechanical Officials (IAPMO) and the National Fire Protection Association (NFPA) to the list of functional recovery working group members."

Related Legislation:

AB 393 (Nazarian, 2019): This bill is substantially similar to this AB 393. This bill was placed on the suspense file in the Senate Appropriations Committee.

AB 1857 (Nazarian, 2018): This bill is substantially similar to this AB 393. *This bill was vetoed by the Governor.* According to the Governor's Veto Message:

“The National Institute of Standards and Technology is in the initial stages of developing an immediate occupancy standard for buildings following a natural disaster. This federal agency is consulting engineers, scientist, and other experts to understand the changes needed to ensure that a building can be used immediately after a natural disaster.

Instead of duplicating this federal process at the state level, it would be wise to allow the Institute to finish its work.”

REGISTERED SUPPORT / OPPOSITION:

Support

Structural Engineers Association of California (Sponsor)
California Building Officials
Personal Insurance Federation of California

Opposition

California State Pipe Trades Council (Support if amended)

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