

CITY REQUIREMENTS TO RETROFIT SOFT STORY BUILDINGS

Frequently Asked Questions

The City of Berkeley requires owners of wood frame buildings containing soft, weak or open front (SWOF) conditions with five or more residential units to retrofit their buildings, per Chapter 19.39 of the Berkeley Municipal Code (BMC). The mandatory retrofit requirements became law as of January 4, 2014. More information is available at the following link: <http://cityofberkeley.info/softstory/>

1. What is a building that contains a soft, weak, or open front condition (“SWOF”, often referred to as “soft story”)?

A wood-frame building with more than one story that typically has extensive ground story windows, garage doors, or open-air spaces such as parking or other similar open floor plan with little or no enclosing solid wall, that lead to a relatively soft or weak lateral load resisting system in the lower story. (See Section 19.39.020 for the technical definition.)

2. Are all SWOF buildings required to be retrofitted?

SWOF wood-frame residential buildings with five or more residential units permitted for construction prior to 1978 must be retrofitted. The law does not apply to buildings with 2-4 units, motels or commercial buildings.

3. How do I find out if my building is a SWOF building?

The inventory of potentially hazardous SWOF buildings was established in 2001 following a series of visual exterior surveys and validating assessments. The most recent list is available at the following link:

[http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3 - Building_and_Safety/Soft%20Story%20Inventory%202003-19-2013.pdf](http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Building_and_Safety/Soft%20Story%20Inventory%202003-19-2013.pdf)

4. How many SWOF buildings are on the inventory?

There are 322 buildings on the inventory. As of June 2014, 143 still need to be retrofitted.

5. I thought Berkeley already had a soft story ordinance.

The City adopted an ordinance in 2005 requiring owners of soft story buildings to prepare an engineering report that analyzed the structural ability of the building to resist earthquake impacts, identified weaknesses and described the future work needed to remedy identified weaknesses. The ordinance also required owners to notify tenants that the building is a soft story and to post the following notice at the building entrance:

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A clearly visible warning sign not less than 8" by 10", with the first two words printed in 50-point bold type and the remaining words in at least 30-point type:
"Earthquake Warning. This is a soft story building with a soft, weak, or open front ground floor. You may not be safe inside or near such buildings during an earthquake."

However, there was no requirement in the 2005 ordinance that the building be seismically upgraded.

6. Why is the City requiring retrofit of SWOF buildings?

SWOF buildings are recognized by engineers and other seismic safety experts as having the potential for sustaining serious damage including collapse in the event of strong earthquakes. For public safety reasons, the City is requiring that SWOF buildings be strengthened.

7. Who is responsible for retrofitting a SWOF building and how long do they have?

Property owners are required to submit a building permit application to retrofit the building no later than December 31, 2016. The retrofit must be completed no later than two years after submittal of the building permit application.

8. What are the engineering criteria for retrofit?

Even though the Berkeley program attempts to address a narrowly defined set of SWOF buildings, this group includes significant diversity in construction methods, materials and irregularities. Such diversity makes it difficult for a single engineering "one-size-fits-all" standard to service the entire group effectively. Extensive consultations with the structural advisory panel resulted in the following engineering criteria:

- Chapter A4 of the 2012 edition of IEBC as the principal structural reference standard for the Phase II Mandatory Retrofit Ordinance. It acknowledges the value of critical story only retrofit and is fully compatible to the latest edition of the California Building Code.
- ASCE 41-06 or ASCE 41-13 procedures for those buildings which may not be fully comparable or well suited for IEBC Chapter A4 criteria or for cases where the owner's or engineer's objective is to achieve a better seismic performance than the minimum required under this Ordinance.
- FEMA P-807 as a pre-approved "substantially equivalent standard" under procedures of CBC Section 104.11 for Alternative Materials, Design and Methods of Construction. This is a new set of guidelines developed by FEMA and the Applied Technology Council (ATC), which focuses on the dominant collapse-vulnerable deficiency but allows the user to customize the retrofit objective.

9. How much will it cost to retrofit a building?

Every building is different, and the City cannot provide an accurate cost estimate. Soft story seismic retrofit costs are generally estimated anywhere from \$2,000 to \$10,000 per unit, with the high end taken from a study in San Francisco. The retrofit costs cited in a 2009 survey of 48 Berkeley projects, conducted by the Rent Board were as follows: average cost per unit - \$3,280; median cost per unit - \$2,500. It is likely that the work has been done soonest in buildings where retrofit costs are lowest.

10. I am an owner of a SWOF, but can't afford to retrofit my building. What are my options?

An owner can request a "hardship exception" to the retrofit requirements and a one year extension of the deadline to complete the retrofit. This should be done in 2016, as the deadline for submitting a building permit application approaches. The City may grant exceptions based on documentation of why an exception is needed, provided that a written plan is submitted for proceeding with the retrofit work, including agreement to seek all available financing.

11. Will retrofit result in the loss of parking spaces?

Whether parking would be lost will depend on the retrofit design. The zoning regulations allow parking to be relocated or removed for public safety structural alterations if approved by the City Traffic Engineer (BMC Section 23C.04.075). The Traffic Engineer will want to confirm other design options have been explored that could preserve parking.

12. Will tenants have to move out during retrofit?

Every building is different, and the City cannot definitively answer this question. However, owners are required to notify tenants of any relocation that is reasonably necessitated by the seismic retrofit at least 30 days in advance of such relocation. It is anticipated that most retrofit work would not require the tenant to relocate. This decision would be made by the building owner.

If asked to move out, tenants should contact the Rent Stabilization Board for more information. The owner and tenant may find it mutually agreeable to temporarily relocate while the work is being performed. The Rent Board has a mediation service and would be willing to work with the parties to see if an agreement could be reached, provided both sides voluntarily participate. If such agreement cannot be reached through conflict resolution or mediation, the tenant may request that the Building Official make a final determination.

13. Can rent be raised to cover the costs of the required retrofit?

Under current Rent Board regulations, a rent increase for a seismic retrofit could possibly be granted. The Rent Board decides these cases on a case-by-case basis, seeking to ensure that increases are limited, a hardship provision exists and they do not have the effect of displacing sitting tenants. For multi-unit properties where a majority of the tenants are “long-term”, i.e. they’ve been living there since 1998 or earlier, the likelihood of a property owner getting a rent increase for a retrofit increases. Under the Rent Stabilization Ordinance, rent adjustments for capital improvements are offset by the amount of rent increases taken since vacancy decontrol that are above the amount provided for in the Annual General Adjustments. Starting in 1999, property owners were allowed to raise rents to market rates for each new tenancy, thus allowing rents to increase above and beyond the amount provided by the Rent Board’s Annual General Adjustments. These increases provide additional resources to property owners, which could be used to cover the cost of capital improvements such as a seismic retrofit. For questions, contact Lief Bursell at the Rent Board at 510 981 4919 or lbursell@cityofberkeley.info.

14. My building survived the 1906 San Francisco and the Loma Prieta earthquake. Why should I be concerned?

In both the 1906 San Francisco and the Loma Prieta earthquakes, the center of shaking was at a significant distance from Berkeley. The potential ground accelerations from an earthquake centered in Berkeley will be much greater. Thus the fact that the building survived these previous earthquakes is not a good predictor of its ability to survive a major earthquake centered on the Hayward Fault in Berkeley.

15. If the building is retrofitted, will the residents be safe and can they stay in their units after an earthquake?

A building will be safer if it is retrofitted, but there is no way to ensure they will be safe or that the building will be allowed to remain occupied after a major earthquake.

16. Who can I contact for more information?

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