

CHAPTER 34B— MANDATORY EARTHQUAKE RETROFIT OF WOOD FRAME BUILDINGS

COMMENT 1:

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Date: May 7, 2013

Comments/Findings:

Add the following chapter:

CHAPTER 34B

MANDATORY EARTHQUAKE RETROFIT OF WOOD-FRAME BUILDINGS

Section 3401B. Purpose and Intent. The purpose of this Chapter is to promote the health, safety, and welfare of San Francisco residents as well as the ability of the City and County of San Francisco to recover from a major earthquake by reducing the possibility of collapse, major structural damage, or risk of fire caused by an earthquake to certain wood-frame buildings.

In furtherance of this purpose, this Chapter establishes seismic retrofit requirements intended to significantly reduce the collapse risk of residential buildings with critically vulnerable lower stories and to increase the likelihood that these buildings will be structurally safe to occupy shortly after an earthquake. The engineering criteria established by this Chapter generally limit the structural retrofit work to the ground story or to a basement or underfloor area that extends above grade where the most critical vulnerabilities are typically located, thereby improving building performance while limiting retrofit costs and impacts.

Section 3402B. Scope. This Chapter shall apply to existing buildings, including mixed-occupancy buildings, that are Type V (wood-frame) construction of three or more stories or two stories over a basement or underfloor area that has any portion extending above grade, and containing five or more dwelling units and for which a permit for construction of a new building was applied for before January 1, 1978 or which is determined by the Department to have been originally constructed before January 1, 1978.

Exceptions:

1. A building that has been seismically strengthened to meet or exceed the standards of Section 1604.11 of this Code or its predecessor provisions within 15 years prior to the operative date of this Chapter is exempt from this Chapter upon the submittal of documentation showing that such work was properly permitted, completed, and maintained as required by this Code, and that the Department has approved such documentation.

2. A building that has completed voluntary seismic strengthening under the provisions of Administrative Bulletin AB-094 is exempt from the requirements of this Chapter.

Section 3403B. Definitions.

In addition to the definitions in Chapter 2 of this Code, the following definitions shall apply for purposes of this Chapter:

DWELLING UNIT. A dwelling unit shall include any individual residential unit within either an R-1 or an R-2 occupancy building. It shall also include a guestroom, with or without a kitchen, within either a tourist or residential hotel or motel but shall not include a "housekeeping room." A dwelling unit shall include an area that is occupied as a dwelling unit, whether such is approved or unapproved for residential use.

STORY. The first story of any building shall be considered a story, whether or not previously exempted from story count under an earlier edition of the San Francisco Building Code.

Section 3404B. Compliance Requirements.

3404B.1. General. The owner of each building subject to this Chapter shall comply with the reporting requirements of this section. If the building is not exempt and does not meet the minimum criteria specified in this Chapter, the owner shall cause the building to be retrofitted to conform to such criteria according to the compliance deadlines set forth in Table 34B-A. Notice of the compliance requirements shall be given by the Department pursuant to Section 3405B.4.

3404B.2. Screening Form. The owner of a building who has been notified that their building is within the scope of this Chapter as well as all other owners of buildings that may be subject to this Chapter shall engage an architect or engineer to submit to the Department within the time limits set forth in Table 34B-A a properly completed Screening Form.

Exception: Buildings exempt based on the exception in Section 3402B, Exception 2 of this Chapter may complete and submit the required Screening Form without engaging an architect or engineer.

3404B.2.1. Required information. The Screening Form to be developed by the Department shall be used to determine whether a building is or is not subject to the requirements of this Chapter, and to assign a building to the appropriate Compliance Tier. The Screening Form shall be completed by an architect as defined in Section 5500 of the California Business and Professions Code or by a civil or structural engineer registered pursuant to the provisions of Section 6700 et seq. of the California Business and Professions Code.

The submitted Screening Form shall include:

1. all information required by the Department to determine compliance requirements, and
2. whether the building is exempt based on Section 3402B, Exception 1 of this Chapter, and
3. a Declaration, based on a review of building information, of:
 - (a) whether the building is exempt because it is outside the scope of this Chapter based on its date of original permit application or construction, number of dwelling units, or number of stories, or
 - (b) if not exempt, the appropriate Compliance Tier.

3404B.2.2. Optional Evaluation Form. The Optional Evaluation Form to be developed by the Department shall be used to determine if an existing building already meets the criteria of Section 3406B.2 of this Chapter. The Optional Evaluation Form shall be completed by an architect as defined in Section 5500 of the California Business and Professions Code or by a civil or structural engineer registered pursuant to the provisions of Section 6700 et seq. of the California Business and Professions Code. The Optional Evaluation Form shall be accompanied by a completed Screening Form and shall include:

1. dates and scope of any seismic retrofit work, and

2. plans and other information as the Department may require that are sufficient to support the Declaration below, and

3. a Declaration of whether the building satisfies the evaluation criteria given in Section 3406B.2 of this Chapter.

3404B.3. Compliance Tiers. Each building not exempt from this Chapter shall be assigned to one of the following Compliance Tiers:

1. Tier I: Buildings that contain a Group A, E, R-2.1, R-3.1 or R-4 occupancy on any story.

2. Tier II: Buildings containing 15 or more dwelling units, except for buildings assigned to Tier I or Tier IV.

3. Tier III: Buildings not falling within the definition of another tier.

4. Tier IV: Buildings that contain a Group B or M occupancy on the first story or in a basement or underfloor area that has any portion extending above grade, and buildings that are in mapped liquefaction zones, except for buildings assigned to Tier I.

3404B.4. Application for a building permit. For each non-exempt and non-complying building, the owner or the owner's authorized agent shall submit to the Department an application for a building permit accompanied by the necessary permit submittal documents indicating the proposed seismic retrofit. A permit for this seismic retrofit work may include minor ancillary work but shall be separate from any other permits for building alterations or repairs unless such work is triggered by or integral to the seismic retrofit work. No work other than is required under current codes shall be triggered by this seismic retrofit work.

3404B4.1. Compliance deadlines. Compliance deadlines for the submission of the Screening Form, Optional Evaluation Form, building permit application, and for completion of seismic retrofit work are given in Table 34B-A. No transfer of title shall alter the time limits for compliance.

3404B4.2. Certificate of Final Completion and Occupancy. A Certificate of Final Completion and Occupancy indicating completion of the required seismic retrofit work shall be obtained upon completion of required seismic retrofit work.

3404B4.3. Damaged Buildings. Notwithstanding the provisions of the Table 34B-A Compliance Deadlines, if an as-yet unretrofitted building subject to this Chapter suffers damage from an earthquake or subsequent fire caused by the earthquake that renders the building uninhabitable, results in structural damage that triggers retrofit under regulations adopted by the Department of Building Inspection, or results in "disproportionate damage" as defined in this Code, such building shall comply with the requirements of this Chapter and other applicable Sections of this Code within one year of such damage. The Department may grant an extension of this time period for good cause. Compliance with the provisions of this Chapter does not supersede the requirement to comply with Section 3405.3 of this Code when otherwise required by this Code.

3404B.5. Historic Preservation. If any portion of the seismic retrofit work will be visible from the exterior of the subject property and the San Francisco Planning Department determines that the building is a historic resource, or if the interior of the building has been given landmark status, the seismic retrofit work shall be conducted in accordance with guidelines developed by the San Francisco Planning Department, taking into account provisions of the California Historical Building Code.

3405B. Program Implementation and Administration; Fee.

3405B.1. Administrative Bulletin. The Department shall prepare an Administrative Bulletin detailing the procedural and implementation requirements for this Chapter. Such procedures shall be generally consistent with the requirements set forth in this Chapter. The Administrative Bulletin may require sign-posting and other public information that the Department determines is necessary or appropriate.

3405B.2. Compliance Deadlines.

TABLE 34B-A

Compliance Deadlines (in years¹).

<u>Compliance Tier</u>	<u>Submission of Screening Form and Optional Evaluation Form</u>	<u>Submittal of Permit Application with Plans for Seismic Retrofit Work</u>	<u>Completion of Work And Issuance of CFC2</u>
<u>I</u>	<u>1</u>	<u>2</u>	<u>4</u>
<u>II</u>	<u>1</u>	<u>3</u>	<u>5</u>
<u>III</u>	<u>1</u>	<u>4</u>	<u>6</u>
<u>IV</u>	<u>1</u>	<u>5</u>	<u>7</u>

¹All time periods are in years measured from 90 days after the operative date of this Chapter.

²All time limits and extensions of Chapter 1A of this Code are applicable, except that all work is to be completed by December 31, 2020, as recommended in California Health & Safety Code Section 19160(l).

3405B.3. Administrative Fee. The fee for services provided by the Department under this Chapter shall be the Standard Hourly Rate for Plan Review and Administration set forth in Table 1A-D of this Code. There shall be no fee required for submittal or review of the Screening Form required by Section 3404B.2. A minimum fee corresponding to two hours for plan review and administration is payable upon submittal of a voluntary Optional Evaluation Form. Additional fees may be charged at the Standard Hourly Rate for additional work and will be payable within 30 days of the Department's notice that payment is due.

3405B.4. Notice.

3405B.4.1. Service of notice on owner. No later than 90 days after the operative date of this Chapter, the Department shall send a notice in accordance with Section 102A.4.2 of this Code to the owner of each building believed to be within the scope of this Chapter. The notice shall inform the owner of the requirement to comply with the provisions of this Chapter, and shall be accompanied by a Screening Form and an informational letter or brochure. Any person who believes that a building that

is within the scope of this Chapter has not been so identified by the Department may notify the Department of the address or location of such building. If the Department determines upon review of the building and/or building records that the building may be within the scope of this Chapter, the Department shall provide notice to the owner as provided in this Section.

3405B.4.2. Failure to give or receive notice. If the owner of a building within the scope of this Chapter has knowledge that they own such a building, then the failure of the Department to issue the notice required by this Section, or the failure of the owner to receive such a notice, shall not relieve the owner of the obligation to comply with the requirements of this Chapter within the time limits set forth in Table 34B-A. For a building not known to the Department to be within the scope of this Chapter and whose owner or owners have no knowledge that the building is within the scope of this Chapter, the time limits set forth in Table 34B-A shall commence upon an owner having actual or constructive notice that the building may be within the scope of this Chapter. In no case, however, shall the final completion date be extended without the approval of the Board of Examiners after hearing an appeal pursuant to Section 3405B.5.

3405B.4.3. Notice to public on Department's website. A list of the buildings by street address and by block and lot for which notice has been given under this Section shall be maintained and made public on the Department's website.

3405B.5. Appeals. The owner of any building subject to this Chapter may appeal to the Board of Examiners any determination made by the Department with respect to compliance with the technical requirements of this Chapter. Such appeal shall be in accordance with the provisions of Section 105A of this Code. The time limits for compliance established by Table 34B-A shall not be extended during any appeal period unless specifically approved by the Board of Examiners. Any person may appeal a determination of the Director related to this Chapter to the Building Inspection Commission pursuant to Chapter 77 of the San Francisco Administrative Code.

3405B.6. Enforcement. Whenever any required action has not been completed within the time limits set forth in Table 34B-A, the Department shall abate the violation in accordance with Section 102A of this Code.

3405B.6.1. Posting of notice. An enforcement action shall, in every case, include the Department posting of the building with a standard Department notice stating as follows:

"Earthquake Warning. This building is in violation of the requirements of the San Francisco Building Code regarding earthquake safety."

This notice shall not be removed until the building is in compliance with this Chapter. This notice shall also be recorded against the title of the building. The Building Official shall cause a release of such notice to be filed with the Assessor-Recorder's Office upon conformance with the requirements of this Chapter.

3406B Engineering Criteria for Evaluation and Retrofit.

3406B.1. General. This Chapter requires that evaluation and/or retrofit of buildings within its scope be undertaken using the engineering criteria established in this section.

3406B.2. Engineering Criteria. A proposed seismic evaluation and/or retrofit plan shall demonstrate that the building satisfies one of the following:

1. FEMA P-807, Seismic Evaluation and Retrofit of Multi-Unit Wood-Frame Buildings With Weak First Stories, as detailed in an Administrative Bulletin to be prepared pursuant to 3406B.3 of this ordinance, with the performance objective of 50 percent maximum probability of exceedance of Onset of Strength Loss drift limits with a spectral demand equal to 0.50 SMS, or

2. ASCE 41-13, Seismic Evaluation and Rehabilitation of Existing Buildings, with the performance objective of Structural Life Safety in the BSE-1E earthquake, or

3. ASCE 41-06, Seismic Rehabilitation of Existing Buildings, with the performance objective of Structural Life Safety in the BSE-1 earthquake with earthquake loads multiplied by 75 percent, or

4. for evaluation only, ASCE 31-03, Seismic Evaluation of Existing Buildings, with the performance level of Life Safety, or

5. for retrofit only, 2012 International Existing Building Code (IEBC) Appendix A-4, or

6. any other rational design basis deemed acceptable by the Department that meets or exceeds the intent of this Chapter.

3406B.3. Alternative Retrofit Criteria. A proposed seismic retrofit plan which fails to meet the criteria of 3406B.2(1) or 3406B.2(5) shall be deemed to comply with this Chapter if, with the approval of the Department, it satisfies the intent of FEMA P-807, Section 6.4.2 with a maximum acceptable Onset of Strength Loss drift limit probability of exceedance of 70 percent.

Exception: Alternative retrofit criteria shall not apply to buildings in which the critical stories, basements, or underfloor areas contain other than parking, storage, or utility uses or occupancies.

3406B.4. Administrative Bulletin for Technical Requirements. The Department shall develop and publish one or more Administrative Bulletins that detail the technical requirements to be used for the evaluation and retrofitting of buildings required to meet the criteria established in Section 3406B.2.

3406B.5. Conformance Period. Any building retrofitted in compliance with this Chapter and properly maintained, shall not, within a period of 15 years after the operative date of this Chapter, be identified as a seismic hazard pursuant to any local building standards adopted after the date of the building seismic retrofit unless the building incurred disproportionate damage, or otherwise has been damaged or altered so that it no longer meets the engineering criteria under which it was retrofitted.

3406B.6. Compliance with this Chapter does not supersede the requirements for compliance with Section 3401.B when otherwise under Chapter 34 of this Code. A permit issued solely for compliance with the provisions of this Chapter shall not be considered a "substantial change" or "structural work" as defined in Chapter 34 and compliance with Section 3401.8 will not be requirement by such work.

[Note: To carryover 2010 San Francisco Amendments to 2013.

Recommend to be brought to the full CAC committee for further action.]

Place an X in one of the following:	Retain as is:	Update as noted:	Revise:	Delete:
			X	
Place an X in one of the following:	More Restrictive:	Less Restrictive:	Neither more nor less:	
			X	

COMMENT 2:

Name: CAC Structural Subcommittee

Date:

Comments/Findings:

Place an X in one of the following:	Retain as is:	Update as noted:	Revise:	Delete:
			X	
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			X	

COMMENT 3:

Name: Code Advisory Committee

Date:

Place an X in one of the following:	Retain as is:	Update as noted:	Revise:	Delete:
			X	
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			X	