



DRAFT #3
ADMINISTRATIVE BULLETIN

NO. AB-094

DATE : December 7, 2010 ~~April 13, 2010~~ (revises bulletin dated May 26, 2009)

SUBJECT : Permit Review and Operation

TITLE : **Definition and Design Criteria for Voluntary Seismic Upgrade of Soft-Story, Type V (wood-frame) Buildings**

PURPOSE : The purpose of this Bulletin is to establish definitions and acceptable design criteria for voluntary seismic upgrade projects for soft-story Type V (wood-frame) buildings that may qualify for various incentives, such as expedited permit review and fee adjustments.

REFERENCE : 2010 ~~2007~~ San Francisco Building Code
Section 1613, Earthquake Loads
Section 3401.8 ~~3403-5~~, Lateral Force Design requirements for Existing Buildings
Section 1604.11, Minimum Lateral Forces for Existing Buildings
City and County of San Francisco Ordinance 54-10, Seismic Strengthening of Soft-Story, Wood-Frame Buildings
AB-004, Priority Permit Processing Guidelines
2009 International Existing Building Code, Appendix Chapter A4 with SEAOC recommendations
2010 ~~2007~~ California Historical Building Code, Chapter 8-7 and 8-8
ASCE/SEI Standard 31-03, 2003, Seismic Evaluation of Existing Buildings
ASCE/SEI Standard 41-06, 2007, Seismic Rehabilitation of Existing Buildings, with Supplement 1

DISCUSSION: A clear definition of “soft-story Type V (wood-frame) building” and the basic design criteria for seismic upgrades to such buildings is essential to the permit submittal and approval of projects that wish to take advantage of City-sponsored voluntary incentives to implement seismic upgrades of potentially seismically hazardous buildings.

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Permits for voluntary structural work that do not reference meeting a specific code standard or that do not qualify for incentives for voluntary seismic upgrade work permit processing may meet any level of upgrade if such work does not increase the hazard of the building.

IMPLEMENTATION

Building owners who wish to take advantage of voluntary seismic upgrade incentives must meet the definition of a soft-story Type V (wood-frame) building and must comply with the retrofit standards as detailed below.

DEFINITIONS

For the purpose of this Administrative Bulletin the following definitions shall apply:

Soft-story Type V (wood-frame) building means a building that meets the following criteria:

- A. a Type V (wood-frame) building as defined in the San Francisco Building Code, and
- B. was constructed prior to May 21, 1973, and
- C. has a ground floor (1st story) level in which
 - a. at least 50% of the floor area of the ground floor is used for Occupancy Classifications A (assembly), B (business), M (mercantile), S (storage, open or enclosed parking garages), or U (private garages), or
 - b. the building has been determined to have either a Weak Story or Soft Story deficiency when evaluated using the ASCE 31 Tier 2 procedure, or
 - c. the building has been determined to have a soft-story deficiency based on engineering analysis acceptable to the Building Official.

RETROFIT STANDARDS

The standards to be applied to the seismic upgrade of soft-story wood-framed buildings in order to qualify for voluntary upgrade incentives shall be one of the following:

- A. Meets the requirements of Appendix Chapter A4 of the 2009 International Existing Building Code, IEBC [Attachment A] with amendments by SEAOC (Structural Engineers Association of California) [Attachment B], or
- B. Meets the requirements of ASCE 41 for the Partial Rehabilitation Objective (Section 1.4.3) (Life Safety Performance Level: S-3) in the BSE-1 earthquake hazard level, or
- C. Meets any other alternate rational design and/or construction methodology that demonstrates compliance with the intent of San Francisco Building Code Section 1604.11.

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For qualified historic buildings, seismic upgrade designs may use the provisions and analysis techniques referenced in the California Historical Building Code, Chapter 8-7, Structural Regulations, and Chapter 8-8, Archaic Materials and Methods of Construction to assist in meeting the retrofit standards [Attachment C].

For the purposes of this bulletin, mitigation of soft-story conditions at the ground floor (1st story) shall be considered the part of the voluntary soft-story wood-frame upgrade work eligible for incentives. Additional seismic upgrade work may be undertaken on the floors above the ground floor; however such additional seismic retrofit work is not considered part of the voluntary soft-story upgrade work and will be subject to standard permitting requirements.

PERMIT PROCESSING

Submittal Documents and Building Permit Application

Building permit applications for voluntary, soft-story Type V (wood-frame) building upgrade work must clearly state the intention to qualify for voluntary incentives in the Project Description portion of the building permit application form. Submittal documents should include the following:

- A. Dimensioned plans showing all exterior walls, interior partitions and any lateral load-resisting, or plans showing Occupancy Classifications and uses of the ground floor if that is the method of qualifying as a soft-story building under this Administrative Bulletin, and
- B. A photograph of the building exterior, and
- C. Structural upgrade plans and necessary supporting calculations and documents prepared by a licensed design professional showing how seismic upgrade will meet the standards adopted in this Administrative Bulletin. Included in these submittal documents should be a listing of archaic materials and values for those materials, if these are to be used as part of the lateral force resisting system.

Expedited Permit Processing

Building permit applications for voluntary soft-story wood-frame seismic retrofit will be expedited as authorized under AB-004 and will be tracked by the Department of Building Inspection for reporting purposes.

Vivian L. Day, C.B.O. Date
Director
Department of Building Inspection

Approved by the Building Inspection Commission on April 21, 2010

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- Attachment A 2009 International Code for Existing Buildings, Appendix Chapter A4
- Attachment B SEAOC (Structural Engineers Association of California) amendments to 2009 IEBC Appendix Chapter A4
- Attachment C 2010 California Historical Building Code, Chapter 8-7 and 8-8
- Attachment D Excerpts from Ordinance 54-10, Seismic Strengthening of Soft-Story, Wood-Frame Buildings

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