

**ORDINANCE NO. \_\_\_\_\_**

An ordinance adding Title 33 – Existing Building Code of the Los Angeles County Code, relating to the adoption of the 2016 California Existing Building Code by reference, with certain changes and modifications.

The Board of Supervisors of the County of Los Angeles ordains as follows:

**SECTION 1.** Title 33 is hereby added to read as follows:

**TITLE 33**

**EXISTING BUILDING CODE**

**CHAPTER 1**

**ADMINISTRATION**

**100 ADOPTION BY REFERENCE.**

Except as hereinafter changed or modified, Sections 102 through 119 of Chapter 1 of Title 26 of the Los Angeles County Code are adopted by reference and incorporated into this Title 33 as if fully set forth below, and shall be known as Sections 102 through 119 of Chapter 1 of Title 33 of the Los Angeles County Code.

Except as hereinafter changed or modified, Chapters 2 through 4, 15, 16, and Appendix Chapter A1, A3, A4, and A6 of that certain code known and designated as the 2016 California Existing Building Code as published by the California Building Standards Commission are adopted by reference and incorporated into this Title 33 as if fully set forth below, and shall be known as Chapters 2 through 4, 15, 16, and Appendix Chapter A1, A3, A4, and A6 of Title 33 of the Los Angeles County Code.

A copy of the 2016 California Existing Building Code shall be at all times maintained by the Building Official for use and examination by the public.

**101 TITLE, PURPOSE, AND INTENT.**

**101.1 Title.** Title 33 of the Los Angeles County Code shall be known as the "Existing Building Code," may be cited as such, and will be referred to herein as "this Code."

**101.2 Purpose.** The purpose of this Code is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety, and welfare insofar as they are affected by the repair, alteration, change of occupancy, addition, and relocation of existing buildings. Consistent with this purpose, the provisions of this Code are intended to confer a benefit on the community as a whole and are not intended to establish a duty of care toward any particular person.

This Code shall not be construed to hold the County of Los Angeles or any officer, employee, or agent thereof responsible for any damage to persons or property by reason of any inspection authorized herein or by reason of the issuance or non-issuance of any permit authorized herein, and/or for any action or omission in connection with the application and/or enforcement of this Code. By adopting the provisions of this Code, the County does not intend to impose on itself, its employees, or agents any mandatory duties of care toward persons and property within its jurisdiction so as to provide a basis of civil liability for damages.

**101.3 Scope.** The provisions of this Code shall apply to the repair, alteration, change of occupancy, addition to and relocation of any existing building or structure within the unincorporated territory of the County of Los Angeles and to such

work or use by the County of Los Angeles in any incorporated city, subject to the criteria of Sections 101.3.1 and 101.3.2.

**101.3.1** **Buildings not previously occupied.** A building or portion of a building that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall be permitted to comply with the provisions of the laws in existence at the time of its original permit unless such permit has expired. Subsequent permits shall comply with the Building Code or Residential Code, as applicable, for new construction.

**101.3.2** **Buildings previously occupied.** The legal occupancy of any building existing on the date of adoption of this Code shall be permitted to continue without change, except as is specifically covered in this Code, the Fire Code, or as is deemed necessary by the Building Official for the general safety and welfare of the occupants and the public.

**101.4** **Safeguards during construction.** Construction work covered in this code, including any related demolition, shall comply with the requirements of Chapter 15.

**101.4** **Applicability.**

**101.4.1** **General.** Where there is a conflict between a general requirement and a specific requirement of this Code, the specific requirement shall be applicable. Where, in any specific case, different sections of this Code specify different materials, methods of construction, or other requirements, the most restrictive shall govern.

**101.4.2 Other laws.** The provisions of this Code shall not be deemed to nullify any provisions of local, state, or federal law.

**101.4.3 Referenced codes and standards.** The codes and standards referenced in this Code shall be considered part of the requirements of this Code to the prescribed extent of each such reference. Where differences occur between provisions of this Code and referenced codes and standards, the provisions of this Code shall apply.

**SECTION 2.** Section 302.6 is hereby added to read as follows:

**302.6 Parapets and appendages.**

**302.6.1 General compliance.**

Whenever the Building Official determines by inspection that, as a result of inadequate construction or bracing to resist horizontal forces, an existing parapet or appendage attached to and supported by an exterior wall of a building is likely to become a hazard to life or property in the event of earthquake disturbance, and such parapet or appendage is not an immediate hazard or danger as described in Section 102 of this Code, the Building Official may provide the owner of the building or other person or agent in control of the building where such parapet or other appendage exists, with a written notice specifying the hazards and the inadequacies of construction or bracing. The owner of the building or other person or agent in control of the building shall, within 12 months from the date of such written notice, eliminate the hazard as set forth below. Any person receiving notice as set out in this Section may appeal, in the manner provided by Section 102.4 of this Code, to the building Board of Appeals.

**302.6.2                      Wall anchor.**

The parapet or appendage shall be removed and the remainder of the wall anchored at the roof line, or it shall be reconstructed so that it will conform structurally as near as it is practicable to do so with requirements of Chapter 16 of this Code, or it shall be otherwise braced and strengthened in a manner satisfactory to the Building Official, so that it will resist a reasonable degree of horizontal forces without becoming dislodged with danger of falling.

**302.6.3                      Inspection of existing condition.**

Where, in the opinion of the Building Official, it is necessary to open a portion of roof, wall, or ceiling of a building in order to determine the structural condition of any parapet or appendage, the Building Official may order the owner to make such opening and the owner shall comply with said order at the owner's sole cost and expense.

**SECTION 3.**                      Section 302.7 is hereby added to read as follows:

**302.7                      Existing glass.**

Whenever the Building Official determines by inspection that an existing glass installation in rooms having an occupant load of more than 100 persons or a means of egress serving an occupant load of more than 100 persons, as determined by Chapter 10, is likely to become a hazard in the event of accidental human impact as described in Section 2406.4 and such installation does not comply with the provisions of this Code for glazing in such locations, the Building Official may provide the owner of the building or other person or agent in control of the building where such glazing exists with a written notice of such condition. The owner of the building or other person or agent in

control of the building shall, within 90 days after receiving said notice, replace such glass or otherwise cause the installation to conform with the requirements of this Code.

**SECTION 4.** Appendix Chapter A2 is hereby added to read as follows:

**CHAPTER A2**

**EARTHQUAKE HAZARD REDUCTION IN**

**EXISTING REINFORCED CONCRETE AND REINFORCED**

**MASONRY WALL BUILDINGS WITH FLEXIBLE DIAPHRAGMS**

**A201                      PURPOSE**

**A201.1                    Purpose.**

The purpose of this chapter is to promote public safety and welfare by reducing the risk of death or injury that may result from the effects of earthquakes on reinforced concrete and reinforced masonry wall buildings with flexible diaphragms. Based on past earthquakes, these buildings have been categorized as being potentially hazardous and prone to significant damage, including possible collapse in a moderate to major earthquake. The provisions of this chapter are minimum standards for structural seismic resistance established primarily to reduce the risk of life loss or injury on both subject and adjacent properties. These provisions will not necessarily prevent loss of life or injury, or prevent earthquake damage to an existing building that complies with these standards.

**A202                      SCOPE**

**A202.1                    Scope.**

The provisions of this chapter shall apply to wall anchorage systems that resist

out-of-plane forces and to collectors in existing reinforced concrete or reinforced masonry buildings with flexible diaphragms. Wall anchorage systems that were designed and constructed in accordance with the 1999 Los Angeles County Building Code (based on the 1997 Uniform Building Code) and subsequent editions of the Los Angeles County Building Code shall be deemed to comply with these provisions.

**A203                  DEFINITIONS**

**A203.1              Definitions.**

For the purpose of this chapter, the applicable definitions contained in the Building Code and the following definitions shall apply:

**FLEXIBLE DIAPHRAGMS.** Roofs and floors such as those sheathed with plywood, wood decking (1-by or 2-by) or metal decks without concrete topping slabs.

**A204                  SYMBOLS AND NOTATIONS**

**A204.1              General.**

For the purpose of this chapter, the applicable symbols and notations in the International Building Code shall apply.

**A205                  GENERAL REQUIREMENTS**

**A205.1              General.**

The seismic-resisting elements specified in this chapter shall comply with provisions of Section 1613 of the Building Code, except as modified herein.

**A205.2              Alterations and repairs.**

Alterations and repairs required to meet the provisions of this chapter shall comply with applicable structural requirements of the building code unless specifically

modified in this chapter.

**A205.3 Requirements for plans.**

The plans shall accurately reflect the results of the engineering investigation and design and shall show all pertinent dimensions and sizes for plan review and construction. The following shall be provided:

1. Floor plans and roof plans shall show existing framing construction, diaphragm construction, proposed wall anchors, cross-ties and collectors. Existing nailing, anchors, cross-ties and collectors shall also be shown on the plans if they are considered part of the lateral force-resisting systems.

2. At elevations where there are alterations or damage, details shall show roof and floor heights, dimensions of openings, location and extent of existing damage and proposed repair.

3. Typical wall panel details and sections with panel thickness, height, pilasters and location of anchors shall be provided.

4. Details shall include existing and new anchors and the method of developing anchor forces into the diaphragm framing, existing and/or new cross-ties, and existing and/or new or improved support of roof and floor girders at pilasters or walls.

5. The basis for design and the building code used for the design shall be stated on the plans.

**A205.4 Structural observation, testing and inspection.**

Structural observation, in accordance with Section 1709 of the Building Code,

shall be required for all structures in which seismic retrofit is being performed in accordance with this chapter. Structural observation shall include visual observation of work for conformance to the approved construction documents and confirmation of existing conditions assumed during design. Structural testing and inspection for new construction materials shall be in accordance with the building code, except as modified by this chapter.

## **A206 ANALYSIS AND DESIGN**

### **A206.1 Reinforced concrete and reinforced masonry wall anchorage.**

Concrete and masonry walls shall be anchored to all floors and roofs that provide lateral support for the wall. The anchorage shall provide a positive direct connection between the wall and floor or roof construction capable of resisting 75 percent of the horizontal forces specified in Section 1613 of the Building Code.

### **A206.2 Special requirements for wall anchorage systems.**

The steel elements of the wall anchorage system shall be designed in accordance with the building code without the use of the 1.33 short duration allowable stress increase when using allowable stress design.

Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.

**Exception:** Existing cast-in-place shear anchors are allowed to be used as wall anchors if the tie element can be readily attached to the anchors, and if the engineer or architect can establish tension values for the existing anchors through the use of

approved as-built plans or testing and through analysis showing that the bolts are capable of resisting the total shear load (including dead load) while being acted upon by the maximum tension force due to an earthquake. Criteria for analysis and testing shall be determined by the building official.

Expansion anchors are only allowed with special inspection and approved testing for seismic loading.

Attaching the edge of plywood sheathing to steel ledgers is not considered compliant with the positive anchoring requirements of this chapter. Attaching the edge of steel decks to steel ledgers is not considered as providing the positive anchorage of this chapter unless testing and/or analysis are performed to establish shear values for the attachment perpendicular to the edge of the deck. Where steel decking is used as a wall anchor system, the existing connections shall be subject to field verification and the new connections shall be subject to special inspection.

### **A206.3 Development of anchor loads into the diaphragm.**

Development of anchor loads into roof and floor diaphragms shall comply with Section 1613 of the International Building Code using horizontal forces that are 75 percent of those used for new construction.

**Exception:** If continuously tied girders are present, the maximum spacing of the continuity ties is the greater of the girder spacing or 24 feet (7315 mm). Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous cross-ties. The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75 percent of the maximum diaphragm

shear.

In wood diaphragms, anchorage shall not be accomplished by use of toenails or nails subject to withdrawal. Wood ledgers, top plates or framing shall not be used in cross-grain bending or cross-grain tension. The continuous ties required in Section 1613 of the Building Code shall be in addition to the diaphragm sheathing. Lengths of development of anchor loads in wood diaphragms shall be based on existing field nailing of the sheathing unless existing edge nailing is positively identified on the original construction plans or at the site.

**A206.4 Anchorage at pilasters.**

Anchorage at pilasters shall be designed for the tributary wall-anchoring load per Section A206.1, considering the wall as a two-way slab. The edges of the two-way slab shall be considered fixed when there is continuity at pilasters and shall be considered pinned at roof and floor. The pilasters or the walls immediately adjacent to the pilasters shall be anchored directly to the roof framing such that the existing vertical anchor bolts at the top of the pilasters are bypassed without permitting tension or shear failure at the top of the pilasters.

**Exception:** If existing vertical anchor bolts at the top of the pilasters are used for the anchorage, additional exterior confinement shall be provided as required to resist the total anchorage force.

The minimum anchorage force at a floor or roof between the pilasters shall be that specified in Section A206.1.

**A206.5 Symmetry.**

Symmetry of wall anchorage and continuity connectors about the minor axis of the framing member is required.

**Exception:** Eccentricity may be allowed when it can be shown that all components of forces are positively resisted. The resistance must be supported by calculations or tests.

**A206.6                      Combination of anchor types.**

New anchors used in combination on a single framing member shall be of compatible behavior and stiffness.

**A206.7                      Anchorage at interior walls.**

Existing interior reinforced concrete or reinforced masonry walls that extend to the floor above or to the roof diaphragm shall be anchored for out-of-plane forces per Sections A206.1 and A206.3. Walls extending through the roof diaphragm shall be anchored for out-of-plane forces on both sides, and continuity ties shall be spliced across or continuous through the interior wall to provide diaphragm continuity.

**A206.8                      Collectors.**

If collectors are not present at reentrant corners or interior shear walls, they shall be provided. Existing or new collectors shall be designed for the capacity required to develop into the diaphragm a force equal to the lesser of the rocking or shear capacity of the reentrant wall or the tributary shear based on 75 percent of the horizontal forces specified in Chapter 16 of the Building Code. The capacity of the collector need not exceed the capacity of the diaphragm to deliver loads to the collector. A connection shall be provided from the collector to the reentrant wall to transfer the full collector

force (load). If a truss or beam other than a rafter or purlin is supported by the reentrant wall or by a column integral with the reentrant wall, then an independent secondary column is required to support the roof or floor members whenever rocking or shear capacity of the reentrant wall is less than the tributary shear.

**A206.9                      Mezzanines.**

Existing mezzanines relying on reinforced concrete or reinforced masonry walls for vertical and/or lateral support shall be anchored to the walls for the tributary mezzanine load. Walls depending on the mezzanine for lateral support shall be anchored per Sections A206.1, A206.2 and A206.3.

**Exception:** Existing mezzanines that have independent lateral and vertical support need not be anchored to the walls.

**A207                      MATERIALS OF CONSTRUCTION**

**A207.1                      Materials.**

All materials permitted by the building code, including their appropriate strength or allowable stresses, may be used to meet the requirements of this chapter.