

**REVISION RECORD FOR THE  
STATE OF CALIFORNIA  
EMERGENCY SUPPLEMENT**

**January 19, 2006**

**2001 Title 24, Part 1, California Building Standards Administrative Code**

**PLEASE NOTE: The date of this Emergency Supplement is for identification purposes only.  
See the History Note Appendix for the adoption and effective dates of the provisions.**

It is suggested that the section number as well as the page number be checked when inserting this material and removing the superseded material. In case of doubt, rely on the section numbers rather than the page numbers because the section numbers must run consecutively.

It is further suggested that the superseded material be retained with this revision record sheet so that the prior wording of any section can be easily ascertained.

Please keep the removed pages with this revision page for future reference.

**NOTE**

**Due to the fact that the application date for a building permit establishes the California Building Standards code provisions that are effective at the local level, which apply to the plans, specifications, and construction for that permit, it is strongly recommended that the removed pages be retained for historical reference.**

**Remove Existing Pages**

83 through 86  
91 and 92

**Insert New Pages**

83 through 86  
91 and 92





c) Determine if the anchorage or bracing of the identified components and equipment complies with one of the following conditions:

1. Installed under a permit issued by OSHPD. Drawings showing the installation and bearing an OSHPD approval stamp are required to show that the installation conforms to Part 2, Title 24. Installation or retrofit of components that were designed to meet NPC 3R requirements must be shown to meet the anchorage and bracing requirements of the California Building Code for new construction. Components designed to meet NPC 3R requirements that do not meet the anchorage and bracing requirements for new construction shall be retrofitted to meet those requirements; or
2. Reviewed and approved by the Department of General Services, Office of Architecture and Construction, Structural Safety Section. Drawings showing: a) the installation; b) bear an Office of Architecture and Construction, Structural Safety Section approval stamp; and c) a five-digit project number on the approval stamp that begins with an "H" prefix, are required to demonstrate that the installation conforms to Part 2, Title 24. It shall also be demonstrated by a written report submitted by the structural engineer, acceptable to the enforcement agency, that an investigation of the anchorage and bracing of components and equipment identified in Section 11.2.3(a) shows it to be constructed in reasonable conformity with these drawings.

Anchorage and bracing of elements that comply with either of these conditions are considered to meet the requirements of NPC 4.

Installation is defined as that which shows the size and type of material for all components of the system including the anchor or fastener manufacturer (if proprietary), type, total number and embedment if connected to structural concrete, masonry or wood.

d) If the components and equipment inventoried in 11.2.3(b) are anchored or braced, but do not meet the requirements of Section 11.2.3(c), determine if the bracing and anchorage is sufficient to meet the code requirements specified in Table 11.1. The bracing capacity shall be determined by calculations based upon information shown in the construction documents. If these documents are incomplete or unavailable, the evaluation shall be based on the as-built conditions, with the capacity of fasteners to masonry, concrete or wood determined by approved tests; and

e) If any of the items inventoried in 11.2.3(b) is unanchored or inadequately braced as determined by Section 11.2.3(d), the building shall be placed in NPC 3.

**11.2.4 Evaluation Procedures for NPC 5.** The following steps shall determine if the building meets the criteria for NPC 5:

a) Identify the specific nonstructural components and equipment that are subject to the requirements of NPC 2 through NPC 5;

b) Conduct an inventory of components and equipment specified in Table 11.1, NPC 2 through NPC 5, noting whether the components and equipment are anchored or braced;

c) Determine if the anchorage or bracing of the identified components and equipment complies with the following conditions:

1. Installed under a permit issued by OSHPD. Drawings showing the installation and bearing an OSHPD approval stamp are required to show that the installation conforms to Part 2, Title 24; or

2. Reviewed and approved by the Department of General Services, Office of Architecture and Construction, Structural Safety Section. Drawings showing: a) the installation; b) bear an Office of Architecture and Construction, Structural Safety Section approval stamp; and c) a five-digit project number on the approval stamp that begins with an "H" prefix, are required to demonstrate that the installation conforms to Part 2, Title 24. It shall also be demonstrated by a written report submitted by the structural engineer, acceptable to the enforcement agency, that an investigation of the anchorage and bracing of components and equipment identified in Section 11.2.4(a) shows it to be constructed in reasonable conformity with these drawings.

Anchorage and bracing of elements that comply with either of these conditions are considered to meet the requirements of NPC 5.

Installation is defined as that which shows the size and type of material for all components of the system including the anchor or fastener manufacturer (if proprietary), type, total number and embedment if connected to structural concrete, masonry or wood.

d) If the components and equipment inventoried in 11.2.4(b) are anchored or braced, but do not meet the requirements of Section 11.2.4(c), determine if the bracing and anchorage is sufficient to meet the code requirements specified in Table 11.1. The bracing capacity shall be determined by calculations based upon information shown in the construction documents. If these documents are incomplete or unavailable, the evaluation shall be based on the as-built conditions, with the capacity of fasteners to masonry, concrete or wood determined by approved tests; and

e) If any of the items inventoried in 11.2.4(b) is inadequately anchored or braced as determined by 11.2.4(d), the building shall be placed in NPC 4.

**11.3 Testing Requirements for Evaluating the Performance of Existing Mechanical Fasteners.** A testing program shall be instituted to determine the capacity of mechanical fasteners used to anchor nonstructural components including the bracing of pipes, ducts and conduit, and the attachment of equipment and other components listed in the 1995 CBC, Part 2, Title 24, Table 16A-O. Anchors shall be categorized as either seismic bracing of pipes ducts or conduit or equipment and other component anchors.

**11.3.1 Anchors Used in the Seismic Bracing of Pipes, Ducts or Conduit.** For anchors used in the seismic bracing of pipes, ducts or conduit, the following shall apply:

1. Twenty percent of the anchors (20 minimum) of a given size and type (wedge, shell and sleeve for expansion bolts), at each level of the structure shall be tension tested to three times the maximum calculated design load specified in Section 1630B, but not less than 500 pounds. A minimum of one anchor in any 4-bolt group shall be tested assuming an equal distribution of the calculated force to the bolt group. One-quarter (1/4)-inch diameter anchors need not be tested. Where none of the anchors in the group have calculated tension, testing shall consist of torque testing.

**EXCEPTION:** Internally threaded anchors, such as shell-type anchors, shall be tested to four times the maximum calculated design loads. Attachment hardware shall be shimmed or removed prior to testing so that it does not prevent the possible withdrawal of the anchor.

2. If an anchor fails the tension test, 20 anchors, installed by the same trade, in the immediate vicinity of the failed anchor shall be tested prior to resuming to a 20 percent sampling rate for testing.



## APPENDIX

## GENERAL SETS OF EVALUATION STATEMENTS

EVALUATION STATEMENTS FOR  
THE BASIC BUILDING SYSTEM

Address the following evaluation statements, marking each either true (T), false (F) or not applicable (N/A). Statements that are found to be true identify issues that are acceptable according to the criteria of these regulations; statements that are found to be false identify issues that need investigation. For guidance in the investigation, refer to the section number indicated in parentheses at the end of the statement.

**Building System**

- T F** LOAD PATH: The structure contains a complete load path for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Section 3.1)
- T F** REDUNDANCY: The structure will remain laterally stable after the failure of any single element. (Section 3.2)

**Configuration**

- T F N/A** WEAK STORY: Visual observation or a Quick Check indicates that there are no significant strength discontinuities in any of the vertical elements in the lateral-force-resisting system; the story strength at any story is not less than 80 percent of the strength of the story above. (Section 3.3.1)
- T F N/A** SOFT STORY: Visual observation or a Quick Check indicates that there are no significant stiffness discontinuities in any of the vertical elements in the lateral-force-resisting system; the lateral stiffness of a story is not less than 70 percent of that in the story above or less than 80 percent of the average stiffness of the three stories above. (Section 3.3.2)
- T F N/A** GEOMETRY: There are no significant geometrical irregularities; there are no setbacks (i.e., no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to the adjacent stories). (Section 3.3.3)
- T F N/A** MASS: There are no significant mass irregularities; there is no change of effective mass of more than 50 percent from one story to the next, excluding light roofs. (Section 3.3.4)
- T F N/A** VERTICAL DISCONTINUITIES: All shear walls, infilled walls and frames are continuous to the foundation. (Section 3.3.5)
- T F** TORSION: The lateral-force-resisting elements form a well-balanced system that is not subject to significant torsion. Significant torsion will be taken as any condition where the distance between the story center of rigidity and the story center of mass is greater than 20 percent of the width of the structure in either major plan dimension. (Section 3.3.6)

**Adjacent Buildings**

- T F** ADJACENT BUILDINGS: There is no immediately adjacent structure that is less than half as tall or has floors/levels that do not match those of the building being evaluated. A neighboring structure is considered "immediately adjacent" if it is within

2 inches times the number of stories away from the building being evaluated. (Section 3.4)

**Deflection Incompatibility**

- T F** DEFLECTION INCOMPATIBILITY: Column and beam assemblies that are not part of the lateral-force-resisting system (i.e., gravity load-resisting frames) are capable of accommodating imposed building drifts, including amplified drift caused by diaphragm deflections, without loss of vertical load-carrying capacity. (Section 3.5)

**Short "Captive" Columns**

- T F** SHORT "CAPTIVE" COLUMNS: There are no columns with height-to-depth ratios less than 75 percent of the nominal height-to-depth ratios of the typical columns at that level. (Section 3.6)

**Materials and Conditions**

- T F N/A** DETERIORATION OF WOOD: None of the wood members shows signs of decay, shrinkage, splitting, fire damage or sagging, and none of the metal accessories is deteriorated, broken or loose. (Section 3.7.1)
- T F N/A** OVERDRIVEN NAILS: There is no evidence of overdriven nails in the shear walls or diaphragms. (Section 3.7.2)
- T F N/A** DETERIORATION OF STEEL: There is no significant visible rusting, corrosion or other deterioration in any of the steel elements in the vertical- or lateral-force-resisting system. (Section 3.7.3)
- T F N/A** DETERIORATION OF CONCRETE: There is no visible deterioration of concrete or reinforcing steel in any of the frame elements. (Section 3.7.4)
- T F N/A** POST-TENSIONING ANCHORS: There is no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors have not been used. (Section 3.7.5)
- T F N/A** CONCRETE WALL CRACKS: All diagonal cracks in the wall elements are 1.0 mm or less in width, are in isolated locations, and do not form an X pattern. (Section 3.7.6)
- T F N/A** CRACKS IN BOUNDARY COLUMNS: There are no diagonal cracks wider than 1.0 mm in concrete columns that encase the masonry infills. (Section 3.7.7)
- T F N/A** PRECAST CONCRETE WALLS: There is no significant visible deterioration of concrete or reinforcing steel or evidence of distress, especially at the connections. (Section 3.7.8)
- T F N/A** MASONRY JOINTS: The mortar cannot be easily scraped away from the joints by hand with a metal tool, and there are no significant areas of eroded mortar. (Section 3.7.9)
- T F N/A** MASONRY UNITS: There is no visible deterioration of large areas of masonry units. (Section 3.7.10)
- T F N/A** CRACKS IN INFILL WALLS: There are no diagonal cracks in the infilled walls that extend throughout a panel or are greater than 1.0 mm wide. (Section 3.7.11)

**EVALUATION STATEMENTS FOR ELEMENTS  
THAT ARE NOT PART OF THE  
LATERAL-FORCE-RESISTING SYSTEM**

Address the following evaluation statements, marking each either true (T), false (F) or not applicable (N/A). Statements that are found to be true identify issues that are acceptable according to the criteria of these regulations; statements that are found to be false identify issues that need investigation. For guidance in the investigation, refer to the section number indicated in parentheses at the end of the statement.

**NONSTRUCTURAL WALLS**

**Partitions**

- T F N/A MASONRY PARTITIONS:** There are no unbraced unreinforced masonry or hollow clay tile partitions in critical care areas, clinical laboratory service spaces, pharmaceutical service spaces, radiological service spaces, and central and sterile supply areas, exit corridors, elevator shafts or stairwells. (Section 10.1.1.1)
- T F N/A STRUCTURAL SEPARATIONS:** At structural separations, partitions in exit corridors have seismic or control joints. (Section 10.1.1.2)
- T F N/A PARTITION BRACING:** In exit corridors, the tops of partitions that extend only to the ceiling line have lateral bracing. (Section 10.1.1.3)

**Cladding and Veneer**

- T F N/A MASONRY VENEER:** Masonry veneer is connected to the back-up with corrosion-resistant ties spaced 24 inches on center maximum with at least one tie for every  $2\frac{2}{3}$  square feet. (Section 10.1.2.1)
- T F N/A CLADDING PANELS IN MOMENT FRAME BUILDINGS:** For moment frame buildings of steel or concrete, panels are isolated from the structural frame to absorb predicted interstory drift without collapse. (Section 10.1.2.2)
- T F N/A CLADDING PANEL CONNECTIONS:** Where bearing connections are required, there are at least two bearing connections for each cladding panel, and there are at least four connections for each cladding panel capable of resisting out-of-plane forces. (Section 10.1.2.3)
- T F N/A CLADDING PANEL CONDITION:** Cladding panel connections appear to be installed properly. No connection element is severely deteriorated or corroded. There is no cracking in the panel materials indicative of substantial structural distress. There is no substantial damage to exterior cladding due to water leakage. There is no substantial damage to exterior wall cladding due to temperature movements. (Section 10.1.2.4)

**Metal Stud Back-up Systems**

- T F N/A GENERAL:** Additional steel studs frame window and door openings. Corrosion of veneer ties, tie screws, studs and stud tracks is minimal. Stud tracks are adequately fastened to the structural frame. (Section 10.1.3.1)
- T F N/A MASONRY VENEER WITH STUD BACK-UP:** Masonry veneer more than 30 feet above the ground is supported by shelf angles or other elements at each floor level. Masonry veneer is adequately anchored to the back-up at locations of through-wall flashing. Masonry veneer is connected to the back-up with corrosion-resistant ties spaced 24 inches on center maximum and with at least one tie for every  $2\frac{2}{3}$  square feet. (Section 10.1.3.2)
- T F N/A MASONRY VENEER WITH CONCRETE BLOCK BACK-UP—GENERAL:** The concrete block back-up qualifies as reinforced masonry. (Section 10.1.4.1)
- T F N/A MASONRY VENEER SUPPORT:** Masonry veneer more than 30 feet above the ground is supported by shelf angles or other elements at each floor level. Masonry veneer is adequately anchored to the back-up at locations of through-wall flashing. Masonry veneer is connected to the back-up with corrosion-resistant ties spaced 24 inches on center maximum and with at least one tie for every  $2\frac{2}{3}$  square feet. The concrete block back-up is positively anchored to the structural frame at 4-foot maximum intervals along the floors and roofs. (Section 10.1.4.2)

**Other Veneer/Panel Systems**

- T F N/A THIN STONE VENEER PANELS:** Stone anchorages are adequate for computed loads. (Section 10.1.5.1)
- T F N/A WOOD/AGGREGATE PANELS:** There is no visible deterioration of screws or wood at panel attachment points. (Section 10.1.5.2)

**Parapets, Cornices, Ornamentation and Appendages**

- T F N/A PARAPETS, CORNICES, ORNAMENTATION AND APPENDAGES:** There are no laterally unsupported unreinforced masonry parapets or cornices above the highest anchorage level with height/thickness ratios greater than 1.5. Concrete parapets with height/thickness ratios greater than 1.5 have vertical reinforcement. Cornices, parapets, signs and other appendages that extend above the highest anchorage level or cantilever from exterior wall faces and other exterior wall ornamentation are reinforced and well anchored to the structural system. (Section 10.1.6)
- T F N/A MEANS OF EGRESS:** Canopies are anchored and braced to prevent collapse and blockage of building exits. (Section 10.1.7)

## HISTORY NOTE APPENDIX FOR CHAPTER 6

### Administrative Regulations for the Office of Statewide Health Planning and Development (Title 24, Part 1, California Code of Regulations)

The format of the history notes has been changed to be consistent with the other parts of the California Building Standards Code. The history notes for prior changes remain within the text of this code.

1. (OSHPD 1/96) Adoption of Chapter 6, Seismic Evaluation Procedures for Hospital Buildings, Part 1, Title 24, C.C.R. Filed with the secretary of state on April 8, 1997, effective April 8, 1997. Approved by the California Building Standards Commission on February 6, 1997.

2. (OSHPD 1/97) New Article 1—Definitions and Requirements based on SB 1953. Approved by the California Building Standards Commission on March 18, 1998. Filed with the Secretary of State on March 25, 1998, effective March 25, 1998.

3. (BSC 2/99) Article 1-7, Conflict of Interest Code. Amend Section 1-701. Approved by the Fair Political Practices Committee on October 29, 1999. Filed with the Secretary of State on December 31, 1999, effective January 30, 2000.

4. (OSHPD EF 1/00) Part 1, Chapter 6, Articles 1, 10, 11 and Appendix. Approved as submitted by the California Building Standards Commission on February 28, 2000. Filed with the Secretary of State on March 3, 2000, effective March 3, 2000. Permanent approval by California Building Standards Commission on May 24, 2000. Certification of Compliance filed with Secretary of State May 26, 2000.

5. (OSHPD EF 2/00) Part 1, Amend Chapter 6, Articles 1, 2, 10 and 11. Emergency approval by the California Building Stan-

dards Commission on May 24, 2000. Filed with the Secretary of State on May 26, 2000, effective May 26, 2000. Permanent approval by California Building Standards Commission September 20, 2000. Certification of Compliance filed with Secretary of State November 15, 2000.

6. (OSHPD EF 5/01) Emergency adoption of amendments to hospital seismic safety evaluation regulations contained in Title 24, C.C.R., Part 1, Chapter 6. Approved by the California Building Standards Commission on November 28, 2001. Filed with the Secretary of State on December 4, 2001, effective December 4, 2001.

7. (OSHPD EF 01/02) Amend Chapter 6 and 7 of Part 1. Approved as emergency by the California Building Standards Commission on January 15, 2003, and filed with the Secretary of State on January 16, 2003. Effective January 16, 2003.

8. (OSHPD EF 01/02) Amend Chapters 6 and 7 of Part 1. Approved as permanent emergency by the California Building Standards Commission. Permanent approval on May 14, 2003. Certification of Compliance filed with the Secretary of State on May 15, 2003. Effective January 16, 2003.

9. (OSHPD EF 01/05) Amend Part 1, Chapter 6, Article 11 and Table 11.1. Approved as emergency by the California Building Standards Commission on December 13, 2005. Filed with the Secretary of State on December 14, 2005 with an effective date of December 14, 2005.