

Chapter 25 Gypsum Board and Plaster

2001 CBC	PROPOSED ADOPTION	OSHPD				DSA-SS	Comments
		1	2	3	4		
	Adopt entire chapter without amendments		X	X			
	Adopt entire chapter with amendments listed below	X			X	X	
	Adopt only those sections listed below						
<i>2501A.1</i>	<i>2501.2 CA</i>	X			X	X	
	<i>2503.2, Item 1 CA</i>	X			X	X	Relocated existing California Building Standards into IBC format
<i>2501A.2</i>	<i>2503.2, Item 2 CA</i>	X			X	X	Relocated existing California Building Standards into IBC format
<i>2501A.3</i>	<i>2503.3, Item 3 CA</i>	X			X	X	
<i>2501A.3</i>	<i>2503.3, Item 4 CA</i>	X			X	X	
<i>2503A.1 & 2504A.1</i>	<i>2504.2 CA</i>	X			X	X	Relocated existing California Building Standards into IBC format
<i>2504A.2</i>	<i>2504.2.1 CA</i>	X			X	X	Relocated existing California Building Standards into IBC format
<i>2513A</i>	<i>2505.3 CA</i>	X			X	X	Relocated existing California Building Standards into IBC format
	<i>2506.2.1.1 CA</i>	X			X	X	
<i>2505A.3 & 2506A.5</i>	<i>2507.3 CA</i>	X			X	X	Relocated existing California Building Standards into IBC format
	<i>2508.5.6</i>	X			X	X	
<i>2508A.8</i>	<i>2510.7.1 CA</i>	X			X	X	

REPEAL OF EXISTING CALIFORNIA AMENDMENTS IN PART OR IN WHOLE THAT ARE NO LONGER NECESSARY AS FOLLOWS:

2001 CBC DIVISION I – GENERAL DESIGN REQUIREMENTS

~~2001 CBC SECTION 2501A – SCOPE:~~ Repeal all amendments in this section.

~~2001 CBC SECTION 2502A – MATERIALS:~~ Repeal all amendments in this section.

~~2001 CBC SECTION 2511A – MATERIALS:~~ Repeal all amendments in this section.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

EXPRESS TERMS

SECTION 2501 - GENERAL

2501.1 Scope.

2501.1.1 General. Provisions of this chapter shall govern the materials, design, construction and quality of gypsum board, lath, gypsum plaster and cement plaster.

2501.1.2 Performance. Lathing, plastering and gypsum board construction shall be done in the manner and with the materials specified in this chapter, and when required for fire protection, shall also comply with the provisions of Chapter 7.

2501.1.3 Other materials. Other approved wall or ceiling coverings shall be permitted to be installed in accordance with the recommendations of the manufacturer and the conditions of approval.

2501.2 Additional Requirements. [For DSA-SS and OSHPD 1 and 4] (Relocated from 2501A.1, 2001 CBC) Details of attachment for wall and ceiling coverings which are not provided for in the UBC or in these regulations shall be detailed in the approved plans and specifications.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2502 - DEFINITIONS

...

SECTION 2503 - INSPECTION

2503.1 Inspection. Lath and gypsum board shall be inspected in accordance with Section 109.3.5, Appendix Chapter 1.

2503.2 Additional requirements for inspection and testing. [For DSA-SS and OSHPD 1 and 4]

1. Lath and gypsum board shall be inspected in accordance with Appendix Chapter 1 and Title 24, Part 1.
2. (Relocated from 2501A.2) No lath or gypsum wallboard or their attachments shall be covered or finished until it has been inspected and approved by the inspector of record and/or special inspector.
3. (Relocated from 2501A.3) The enforcement agency may require tests to be made in accordance with approved standards to determine compliance with the provisions of these regulations.

4. (Relocated from 2501A.3) The testing of gypsum and gypsum products shall conform with standards listed in Table 2506.2.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2504 - VERTICAL AND HORIZONTAL ASSEMBLIES

2504.1 Scope. The following requirements shall be met where construction involves gypsum board, lath and plaster in vertical and horizontal assemblies.

2504.1.1 Wood framing. Wood supports for lath or gypsum board, as well as wood stripping or furring, shall not be less than 2 inches (51 mm) nominal thickness in the least dimension.

Exception: The minimum nominal dimension of wood furring strips installed over solid backing shall not be less than 1 inch by 2 inches (25 mm by 51 mm).

2504.1.2 Studless partitions. The minimum thickness of vertically erected studless solid plaster partitions of ³/₈-inch (9.5 mm) and ³/₄-inch (19.1 mm) rib metal lath or ¹/₂-inch-thick (12.7 mm) long-length gypsum lath and gypsum board partitions shall be 2 inches (51 mm).

2504.2 Additional Requirements. [For DSA-SS and OSHPD 1 and 4] (Relocated from 2503A.1 and 2504A.1, 2001 CBC) In addition to the requirements of this section, the horizontal and vertical assemblies of plaster or gypsum board shall be designed to resist the loads specified in Chapter 16A [for OSHPD] 16B of this code. For wood framing, see Chapter 23 A [for OSHPD] 23B. For metal framing, see Chapter 22A [for OSHPD] 22B. For suspended acoustical ceiling systems, see Section 2506. For gypsum construction see Section 2508.

2504.2.1 (Relocated from 2504A.2, 2001 CBC) Wood Furring Strips. Wood furring strips for ceilings fastened to floor or ceiling joist shall be nailed at each bearing with two common wire nails, one of which shall be a slant nail and the other a face nail, or by one nail having spirally grooved or annular grooved shanks approved by the enforcement agency for this purpose. All stripping nails shall penetrate not less than 1 ³/₄ inches (44.5 mm) into the member receiving the point. Holes in stripping at joints shall be subdrilled to prevent splitting.

Where common wire nails are used to support horizontal wood stripping for plaster ceilings, such stripping shall be wire tied to the joists 4 feet (1219 mm) on center with two strands of No. 18 W&M gage galvanized annealed wire to an 8d common wire nail driven into each side of the joist 2 inches (51 mm) above the bottom of the joist or to each end of a 16d common wire nail driven horizontally through the joist 2 inches (51 mm) above the bottom of the joist, and the ends of the wire secured together with three twists of the wire.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2505 - SHEAR WALL CONSTRUCTION

2505.1 Resistance to shear (wood framing). Wood-framed shear walls sheathed with gypsum board, lath and plaster shall be designed and constructed in accordance with Section 2306.4 and are permitted to resist wind and seismic loads. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7.

2505.2 Resistance to shear (steel framing). Cold-formed steel-framed shear walls sheathed with gypsum board and constructed in accordance with the materials and provisions of Section 2210.5 are permitted to resist wind and seismic loads. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7.

2505.3 (Relocated from 2513A, 2001 CBC) [For DSA-SS and OSHPD 1 and 4] Section 2505.1 and 2505.2 are not permitted by DSA-SS and OSHPD.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2506 - GYPSUM BOARD MATERIALS

2506.1 General. Gypsum board materials and accessories shall be identified by the manufacturer's designation to indicate compliance with the appropriate standards referenced in this section and stored to protect such materials from the weather.

2506.2 Standards. Gypsum board materials shall conform to the appropriate standards listed in Table 2506.2 and Chapter 35 and, where required for fire protection, shall conform to the provisions of Chapter 7.

TABLE 2506.2 - GYPSUM BOARD MATERIALS AND ACCESSORIES

MATERIAL	STANDARD
Accessories for gypsum board	ASTM C 1047
Adhesives for fastening gypsum wallboard	ASTM C 557
Exterior soffit board	ASTM C 931
Fiber-reinforced gypsum panels	ASTM C 1278
Glass mat gypsum backing panel	ASTM C 1178
Glass mat gypsum substrate	ASTM C 1177
Gypsum backing board and gypsum shaftliner board	ASTM C 442
Gypsum ceiling board	ASTM C 1395
Gypsum sheathing	ASTM C 79
Gypsum wallboard	ASTM C 36
Joint reinforcing tape and compound	ASTM C 474; C 475
Nails for gypsum boards	ASTM C 514, F 547, F 1667
Predecorated gypsum board	ASTM C 960

Steel screws	ASTM C 954; C 1002
Steel studs, load bearing	ASTM C 955
Steel studs, nonload bearing	ASTM C 645
Standard specification for gypsum board	ASTM C 1396
Testing gypsum and gypsum products	ASTM C 22; C 472; C 473
Water-resistant gypsum backing board	ASTM C 630

2506.2.1 Other materials. Metal suspension systems for acoustical and lay-in panel ceilings shall conform with ASTM C 635 listed in Chapter 35 and Section 13.5.6 of ASCE 7 for installation in high seismic areas.

2506.2.1.1 Additional Requirements. [For DSA-SS and OSHPD 1 and 4] In addition to the requirements of Section 2506.2.1 metal suspension systems shall comply with Section 13.5.6 of ASCE 7 as modified in Section 1614A.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2507 - LATHING AND PLASTERING

2507.1 General. Lathing and plastering materials and accessories shall be marked by the manufacturer's designation to indicate compliance with the appropriate standards referenced in this section and stored in such a manner to protect them from the weather.

2507.2 Standards. Lathing and plastering materials shall conform to the standards listed in Table 2507.2 and Chapter 35 and, where required for fire protection, shall also conform to the provisions of Chapter 7.

TABLE 2507.2 - LATH, PLASTERING MATERIALS AND ACCESSORIES

MATERIAL	STANDARD
Accessories for gypsum veneer base	ASTM C 1047
Blended cement	ASTM C 595
Exterior plaster bonding compounds	ASTM C 932
Gypsum base for veneer plasters	ASTM C 588
Gypsum casting and molding plaster	ASTM C 59

Gypsum Keene's cement	ASTM C 61
Gypsum lath	ASTM C 37
Gypsum plaster	ASTM C 28
Gypsum veneer plaster	ASTM C 587
Interior bonding compounds, gypsum	ASTM C 631
Lime plasters	ASTM C 5; C 206
Masonry cement	ASTM C 91
Metal lath	ASTM C 847
Plaster aggregates	
Sand	ASTM C 35; C 897
Perlite	ASTM C 35
Vermiculite	ASTM C 35
Plastic cement	ASTM C 1328
Portland cement	ASTM C 150
Steel screws	ASTM C 1002; C 954
Steel studs and track	ASTM C 645; C 955
Welded wire lath	ASTM C 933
Woven wire plaster base	ASTM C 1032

2507.3 [For DSA-SS and OSHPD 1 and 4] Lath attachment to horizontal wood supports. (Relocated from 2505A.3 and 2506A.5, 2001 CBC) Where interior or exterior lath is attached to horizontal wood supports, either of the following attachments shall be used in addition to the methods of attachment set forth in Table 25A-C described in referenced standards listed in Table 2507.2.

1. Secure lath to alternate supports with ties consisting of a double strand of No. 18 W & M gage galvanized annealed wire at one edge of each sheet of lath. Wire ties shall be installed not less than 3 inches (76 mm) back from the edge of each sheet and shall be looped around stripping, or attached to an 8d common wire nail driven into each side of the joist 2 inches (51 mm) above the bottom of the joist or to each end of a 16d common wire nail driven horizontally through the joist 2 inches (51 mm) above the bottom of the joist and the ends of the wire secured together with three twists of the wire.
2. Secure lath to each support with 1/2-inch-wide (12.7 mm), 1 1/2-inch-long (38mm) No. 9 W & M gage, ring shank, hook staple placed around a 10d common nail laid flat under the surface of the lath not more than 3 inches (76 mm) from edge of each sheet. Such staples may be placed over ribs of 3/8-inch (9.5 mm) rib lath or over back wire of welded wire fabric or other approved lath, omitting the 10d nails.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2508 - GYPSUM CONSTRUCTION

2508.1 General.

...

2508.2 Limitations.

...

2508.3 Single-ply applications.

...

2508.4 Joint treatment.

...

2508.5 Horizontal gypsum board diaphragm ceilings. Gypsum board shall be permitted to be used on wood joists to create a horizontal diaphragm ceiling in accordance with Table 2508.5.

TABLE 2508.5 - SHEAR CAPACITY FOR HORIZONTAL WOOD FRAMED GYPSUM BOARD DIAPHRAGM CEILING ASSEMBLIES

MATERIAL	THICKNESS OF MATERIAL (MINIMUM) (inches)	SPACING OF FRAMING MEMBERS (MAXIMUM) (inches)	SHEAR VALUE ^{a,b} (plf of ceiling)	MINIMUM FASTENER SIZE
Gypsum board	1/2	16 o.c.	90	5d cooler or wallboard nail; 1 5/8-inch long; 0.086-inch shank; 15/64-inch head ^c
Gypsum board	1/2	24 o.c.	70	5d cooler or wallboard nail; 1 5/8-inch long; 0.086-inch shank; 15/64-inch head ^c

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.59 N/m.

- a. Values are not cumulative with other horizontal diaphragm values and are for short-term loading due to wind or seismic loading. Values shall be reduced 25 percent for normal loading.
- b. Values shall be reduced 50 percent in Seismic Design Categories D, E and F.
- c. 1 1/4-inch, No. 6 Type S or W screws are permitted to be substituted for the listed nails.

2508.5.1 Diaphragm proportions. The maximum allowable diaphragm proportions shall be 1 1/2:1 between shear resisting elements. Rotation or cantilever conditions shall not be permitted.

2508.5.2 Installation. Gypsum board used in a horizontal diaphragm ceiling shall be installed perpendicular to ceiling framing members. End joints of adjacent courses of gypsum board shall not occur on the same joist.

2508.5.3 Blocking of perimeter edges. All perimeter edges shall be blocked using a wood member not less than 2-inch by 6-inch (51 mm by 159 mm) nominal dimension. Blocking material shall be installed flat over the top plate of the wall to provide a nailing surface not less than 2 inches (51 mm) in width for the attachment of the gypsum board.

2508.5.4 Fasteners. Fasteners used for the attachment of gypsum board to a horizontal diaphragm ceiling shall be as defined in Table 2508.5. Fasteners shall be spaced not more than 7 inches (178 mm) on center (o.c.) at all supports, including perimeter blocking, and not more than 3/8 inch (9.5 mm) from the edges and ends of the gypsum board.

2508.5.5 Lateral force restrictions. Gypsum board shall not be used in diaphragm ceilings to resist lateral forces imposed by, masonry or concrete construction.

2508.5.6 [For DSA-SS and OSHPD 1 and 4] Diaphragm ceiling connection to partitions. *Gypsum board shall not be used in diaphragm ceilings to resist lateral forces imposed by partitions. Connection of diaphragm ceiling to the vertical lateral force resisting elements shall be designed and detailed to transfer lateral forces.*

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2509 - GYPSUM BOARD IN SHOWERS AND WATER CLOSETS

...

SECTION 2510 - LATHING AND FURRING FOR CEMENT PLASTER (STUCCO)

2510.1 General.

...

2510.2 Weather protection.

...

2510.3 Installation.

...

2510.4 Corrosion resistance.

...

2510.5 Backing.

...

2510.6 Water-resistive barriers.

...

2510.7 Preparation of masonry and concrete. Surfaces shall be clean, free from efflorescence, sufficiently damp and rough for proper bond. If the surface is insufficiently rough, approved bonding agents or a portland cement dash bond coat mixed in proportions of not more than two parts volume of sand to one part volume of portland cement or plastic cement shall be applied. The dash bond coat shall be left undisturbed and shall be moist cured not less than 24 hours.

2510.7.1 [For DSA-SS and OSHPD 1 and 4] Additional Requirements. *(Relocated from 2508A.8, 2001 CBC)* ~~Approved~~ Bonding agents shall conform with the provisions of United States Government Military Specifications MIL-B-19235.

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790

SECTION 2511 INTERIOR PLASTER

...

SECTION 2512 EXTERIOR PLASTER

...

SECTION 2513 EXPOSED AGGREGATE PLASTER

...

Notation [For DSA-SS]:

Authority: Education Code Sections 17310, 81142; Health & Safety Code Section 16022

Reference(s): Education Code Sections 17280 - 17317, and 811130 - 81149; Health & Safety Code Sections 16000 – 16023

Notation [For OSHPD]:

Authority: Health and Safety Code Section 129850

Reference: Health and Safety Code Sections 1275, 129850 and 129790