

Chapter 24 - Glass and Glazing

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						
2402a	2403.1.1 CA	X			X	X	Relocated existing California Building Standards into IBC format
2404a	2403.2.1 CA	X			X	X	Relocated existing California Building Standards into IBC format
Table 24-B	Table 2403.2.1 CA	X			X	X	Relocated existing California Building Standards into IBC format
2403	2403.6	X			X	X	Relocated existing California Building Standards into IBC format
Table 24-D	Table 2403.6 CA	X			X	X	Relocated existing California Building Standards into IBC format
2406.1	2406.1.5	X			X	X	Relocated existing California Building Standards into IBC format
Table 24-C	Table 2406.1.5 CA	X			X	X	Relocated existing California Building Standards into IBC format

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

2001 CBC SECTION 2406A – SAFETY GLAZING: Repeal amendments in following subsections.

~~2406.2 and 2406.3.~~

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 2401 - GENERAL

2401.1 Scope. The provisions of this chapter shall govern the materials, design, construction and quality of glass, light-transmitting ceramic and light-transmitting plastic panels for exterior and interior use in both vertical and sloped applications in buildings and structures.

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SECTION 2403 - GENERAL REQUIREMENTS FOR GLASS

2403.1 Identification. Each pane shall bear the manufacturer's mark designating the type and thickness of the glass or glazing material. The identification shall not be omitted unless approved and an affidavit is furnished by the glazing contractor certifying that each light is glazed in accordance with approved construction documents that comply with the provisions of this chapter. Safety glazing shall be identified in accordance with Section 2406.2.

Each pane of tempered glass, except tempered spandrel glass, shall be permanently identified by the manufacturer. The identification mark shall be acid etched, sand blasted, ceramic fired, laser etched, embossed or of a type that, once applied, cannot be removed without being destroyed.

Tempered spandrel glass shall be provided with a removable paper marking by the manufacturer.

2403.1.1 Additional Requirements. *(Relocated from 2402a, CBC 2001) [For DSA-SS and OSHPD 1 and 4]* Each light of safety glazing material installed in hazardous locations as defined in Section 2406 of this chapter shall be identified by a label which will specify the labeler, whether the manufacturer or installer, and state that safety glazing material has been utilized in such installations. The label shall be legible and visible from the inside of the building after installation and shall specify that the label shall not be removed.

EXCEPTION: Tempered glass shall have an etched manufacturer's label.

2403.2 Glass supports. Where one or more sides of any pane of glass are not firmly supported, or are subjected to unusual load conditions, detailed construction documents, detailed shop drawings and analysis or test data assuring safe performance for the specific installation shall be prepared by a registered design professional.

2403.2.1 Additional Requirements. *(Relocated from 2404. 1a, CBC 2001) [For DSA-SS and OSHPD 1 and 4]* In addition to the requirements of Section 2403.2, glass supports shall comply with the following:

1. The construction documents and analysis or test data required per Section 2403.2 shall be submitted to the enforcement agency for approval.
2. Glass firmly supported on all four edges shall be glazed with minimum laps and edge clearances set forth in Table 24-B 2403.2.1. enforcement agency for..... Glass supports shall be considered firm when deflection of the support at design load does not exceed 1/175 of the span.

(Relocated from Table 24-B, CBC 2001) TABLE 24-B 2403.2.1 – MINIMUM GLAZING REQUIREMENTS

Fixed Windows and Openable Windows Other Than Horizontal Siding					
GLASS AREA	UP TO 6 SQ. FT.	6 TO 14 SQ. FT.	14 TO 32 SQ. FT.	32 TO 50 SQ. FT.	OVER 50 SQ. FT.
× 0.0929 for m², × 25.4 for mm					
1. Minimum Frame Lap	1/4"	1/4"	5/16"	3/8"	1/2"
2. Minimum Glass Edge Clearance	1/8" ^{1,2}	1/8" ^{1,2}	3/16" ¹	1/4"	1/4" ¹
3. Continuous Glazing Rabbet and Glass Retainer ³	Required				

4. Resilient Setting Material ⁴	Not Required	Required			
<i>Sliding Doors and Horizontal Sliding Windows</i>					
GLASS AREA	UP TO 14 SQ. FT.	14 TO 32 SQ. FT.	32 TO 50 SQ. FT.	OVER 50 SQ. FT.	
<i>x 0.0929 for m², x 25.4 for mm</i>					
5. Minimum Glass Frame Lap	1/4"	5/16"	3/8"	1/2"	
6. Minimum Glass Edge Clearance	1/8" ²	3/16"	1/4"	1/4"	
7. Continuous Glazing Rabbet and Glass Retainer ³	Required above third story	Required			
8. Resilient Setting Material ⁴	Not Required			Required	

¹ Glass edge clearance in fixed openings shall not be less than required to provide for wind and earthquake drift.

² Glass edge clearance at all sides of pane shall be a minimum of 3/16 inch (4.8 mm) where height of glass exceeds 3 feet (914 mm).

³ Glass retainers such as metal, wood or vinyl face stops, glazing beads, gaskets, glazing clips and glazing channels shall be of sufficient strength and fixation to serve this purpose.

⁴ Resilient setting material shall include preformed rubber or vinyl plastic gaskets or other materials which are proved to the satisfaction of the building official to remain resilient.

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2403.6 (Relocated from 2403, CBC 2001) [For DSA-SS and OSHPD 1 and 4] Additional Requirements.
Special Glazing materials shall also meet the requirements of Table 24-D 2403.6.

**(Relocated from Table 24-D, CBC 2001) TABLE 24-D 2403.6 – [For DSA-SS and OSHPD 1 and 4]
ADDITIONAL REQUIREMENTS FOR APPLICATION OF SPECIAL GLAZING MATERIALS**

GLAZING MATERIALS	SIZE OF INDIVIDUAL GLAZED AREA	REQUIREMENTS
Annealed glass (regular plate, float, sheet, rolled or obscure)	Over 6 square feet (0.56 m ²)	Not less than 3/16 inch (4.8 mm) nominal thickness. Each glazed area must be protected by protective grille or push bar ¹ firmly attached to stiles on each exposed side.
Annealed glass (regular plate, float, sheet, rolled or obscure) face sandblasted, etched or otherwise Depreciated	Over 6 square feet (0.56 m ²)	Not less than 7/32 inch (5.6 mm) nominal thickness. Each glazed area must be protected by protective grille or push bar ¹ firmly attached to stiles on each exposed side.
Fully tempered glass Laminated glass Wire glass (obscure, patterned or transparent) Transparent rigid plastic	All sizes	Shall pass the text requirements of ANSI Z97.1.

¹ Shall be constructed and attached in such a manner so as to limit or prevent human impact from being delivered to glass surface.

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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 2406 – SAFETY GLAZING

2406.1 Human impact loads. Individual glazed areas, including glass mirrors, in hazardous locations as defined in Section 2406.3 shall comply with Sections 2406.1.1 through 2406.1.45.

2406.1.5 Additional Requirements. [For DSA-SS and OSHPD 1 and 4] *In additional to the requirements of Section 2406.1, glazing shall also comply with Tables 2403.6 and 2406.1.5.*

(Relocated from Table 24-C, CBC 2001) **TABLE 24-C-2406.1.5 – [For DSA-SS and OSHPD 1 and 4]**
IMPACT LOADS - GLAZING

SPECIFIC HAZARDOUS LOCATIONS	SIZE OF INDIVIDUAL GLAZED AREA	REQUIREMENTS ^{1,2}
Glazing in exit and entrance doors and fixed glazed panels	Over 6 square feet (0.56 m ²)	Each glazed area shall pass the test requirements of ANSI Z97.1 if not protected by a protective grille or push bar ³ firmly attached to stiles on each exposed side
Glazing in storm doors	Over 2 square feet (0.186 m ²)	Each glazed area shall pass the test requirements of ANSI Z97.1 if not protected by a protective grille firmly attached to stiles on each exposed side.
Glazing in sliding doors (both fixed and sliding panels)	Over 6 square feet (0.56 m ²)	Each glazed area shall pass the test requirements of ANSI Z97.1.
Glass in all unframed doors (swinging)	All sizes	Shall be fully tempered glass and pass the test requirements of ANSI Z97.1.
Glazing in shower doors and tub enclosures	All sizes	Shall pass the test requirements of ANSI Z97.1.

¹ Annealed glass less than single strength (SS) in thickness shall not be used.

² If short dimension is larger than 24 inches (610 mm), annealed glass must be doubled strength (DS) or thicker.

³ Shall be constructed and attached in such a manner so as to limit or prevent human impact from being delivered to glass surface.

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Notation [For DSA-SS]:

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

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