



California Building Code, Part 2 Volume 2

CHAPTER 16A STRUCTURAL DESIGN

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SECTION 1603A—CONSTRUCTION DOCUMENTS

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1603A.1.5 Earthquake design data. The following information related to seismic loads shall be shown, regardless of whether seismic loads govern the design of the lateral force-resisting system of the structure:

1. *Project location.*

2. ~~1.~~ Risk category.

3. ~~2.~~ Seismic importance factor, I_e .

4. ~~3.~~ Spectral response acceleration parameters, S_S and S_1 .

5. ~~4.~~ Site class.

6. ~~5.~~ Design spectral response acceleration parameters, S_{DS} and S_{D1} , *MPRS spectrum or Site-specific response spectrum.*

7. *Design spectral response acceleration, S_{DS} , for non-structural component bracing.*

8. ~~8.~~ *Seismic design category.*

9. ~~9.~~ Basic seismic force-resisting system(s), *in each direction.*

~~8. Design base shear(s).~~

~~9. Seismic response coefficient(s), CS .~~

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- 10. ~~Response modification coefficient(s), R .~~ Seismic force-resisting system factors R , C_d , and Ω_0 in each direction.
- 11. Seismic response coefficient, C_s , in each direction.
- 12. Design base shear, V , in each direction.
- 13. Design earthquake displacement, δ_{DE} , in each direction.
- 14. Redundancy factor, ρ , in each direction.
- 15. ~~11.~~ Analysis procedure used.
- 16. Fundamental period, T , in each direction.
- 17. Approximate fundamental period, T_a , in each direction.
- 18. ~~12.~~ Applicable horizontal structural irregularities.
- 19. ~~13.~~ Applicable vertical structural irregularities.
- 20. ~~14.~~ Location of base as defined in ASCE 7, Section 11.2.

1603A.1.5.1 Connections. Connections that resist design seismic forces shall be designed and detailed on the design drawings.

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1603A.1.6 Geotechnical information. ~~The design load-bearing values of soils shall be shown on the construction documents.~~
The construction documents shall provide a description of the foundation system and the design load-bearing values of soils and/or deep foundations elements. In Seismic Design Categories C through F, the capacity of the soil/foundation for seismic load cases shall be included.

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SECTION 1605A—LOAD COMBINATIONS

1605A.1 General. Buildings and other structures and portions thereof shall be designed to resist the strength load combinations specified in ASCE 7, Section 2.3, the allowable stress design load combinations specified in ASCE 7, Section 2.4, or the alternative allowable stress design load combinations of Section 1605A.2.

Exceptions:

1. The modifications to load combinations of ASCE 7, Section 2.3, ASCE 7, Section 2.4 and Section 1605A.2 specified in ASCE 7 Chapters 18 and 19 shall apply. [Exception 2 of ASCE 7 Section 2.4.5 shall not be permitted.](#)

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SECTION 1607A—LIVE LOADS

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TABLE 1607A.1—MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L_0 , AND MINIMUM CONCENTRATED LIVE LOADS—continued				
OCCUPANCY OR USE		UNIFORM (psf)	CONCENTRATED (pounds)	ALSO SEE SECTION
...	...	...	...	...
18. Hospitals [OSHPD1 & 4]	Corridors above first floor	80	1,000	—
	Operating rooms, laboratories ^a	60	1,000	
	Patient rooms	40	1,000	
	Mechanical and electrical areas including open areas around equipment	50	1000	
	Storage			
	Light	125		
	Heavy	250		
	Dining areas not used for assembly	100	1000	
	Kitchen and serving areas	50	1000	
...	...	...	...	...

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm², 1 square foot = 0.0929 m², 1 pound per square foot = 0.0479 kN/m², 1 pound = 0.004448 kN.

a. Live load reduction is not permitted.

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SECTION 1617A—MODIFICATIONS TO ASCE 7

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1617A.1.5 ~~Reserved.~~ ASCE 7 Section 12.2.3.2 [OSHDP 1 & 4] Modify ASCE 7 Section 12.2.3.2 (g) with the following:

Modify the last sentence "... and Section 12.10.3.3, in addition to amplification by item (d)," by deleting "...in addition to amplification by item (d)."

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1617A.1.11 ASCE 7, Section 12.7.2. ...

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1617A.1.11a ASCE 7, Section 12.8.2. [OSHDP 1 & 4] Modify ASCE 7, Equation 12.8-3, as follows:

$$C_s = \frac{S_a}{\left(\frac{R}{I_e}\right)} \leq \frac{S_{DS}}{\left(\frac{R}{I_e}\right)} \quad (12.8-3)$$

1617A.1.12 ASCE 7, Section 12.10.2.1. ...

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1617A.1.18a ASCE 7 Section 13.3.1.5. [OSHDP 1 & 4] Modify ASCE 7 Section 13.3.1.5 with the following:

1. Modify the sentence after Equation (13.3-7), “where a_i is the maximum acceleration at level i obtained from the nonlinear response history analysis at the Design Earthquake ground motion.” by adding the word “total” before acceleration.
2. Add the following at the end of the section. For base-isolated structures designed using nonlinear response history analysis, a smaller lower limit of F_p is permitted, but shall not be less than one-half of that determined by Equation (13.3-3).

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1617A.1.37a ASCE 7, Section 18.4 [OSHDP 1 & 4] Replace last paragraph ASCE 7, Section 18.4.1 with the following:

The maximum drift at MCE_R shall neither exceed 3%, nor the drift limits specified in Table 12.12-1 times the smaller of $1.5R/C_d$ and ~~1.9~~ 2.0. C_d and R shall be taken from Table 12.2-1 for the building framing under consideration.

CHAPTER 17A SPECIAL INSPECTIONS AND TESTS

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SECTION 1705A—REQUIRED SPECIAL INSPECTION AND TESTS

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1705A.5.5 Structural glued laminated and cross-laminated timber.

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Exception: Special Inspection is not required for non-custom prismatic glued laminated members identified on drawings ~~and sourced from stock or general inventory~~ of 5 1/2-inch maximum width and 18-inch maximum depth, and with a maximum clear span of 32 feet, manufactured and marked in accordance with ANSI/APA A190.1 Section 14.1 for noncustom members.

CHAPTER 35 REFERENCED STANDARDS

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ACI American Concrete Institute, 38800 Country Club Drive,
Farmington Hills, MI 48331-3439

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**318—19 [\(22\)](#): Building Code Requirements for Structural
Concrete**

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