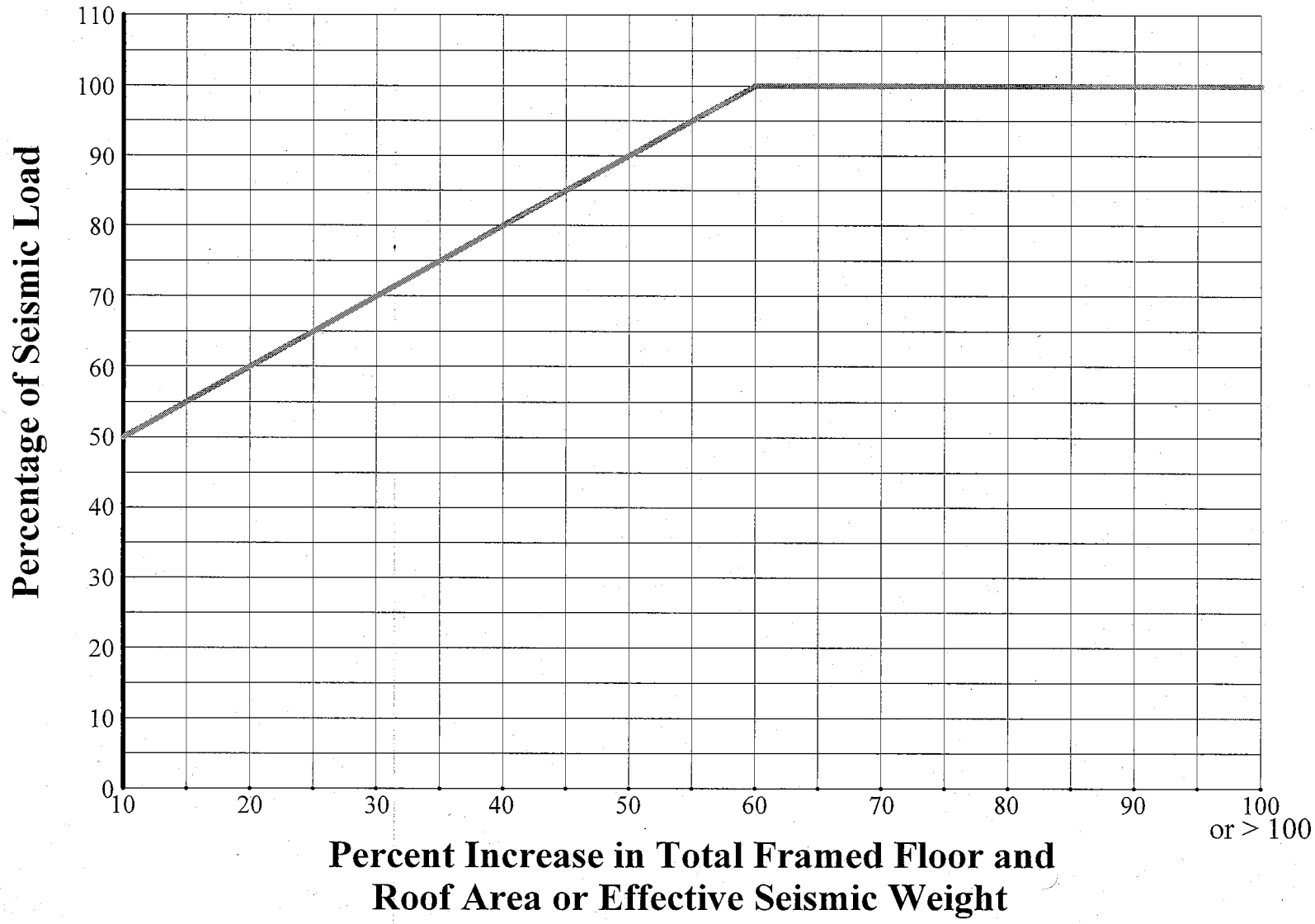

Figure 3408-1
1-16-05

TABLE 3408-1
Design Coefficients and Factors for Seismic Force Resisting Systems Not Permitted by Code Requirements for New Construction

Basic Seismic Force Resisting System[1]	Respense Modification Coefficient, R	System Overstrength Factor, Ωo	Deflection Amplification Factor, Cd
Bearing Wall Systems			
Steel concentrically braced frame (CBF) with diagonal[3] or X-bracing			
CBF per 6th Ed SBC[2] except Sect 9.5 of AISC 1992 Seismic Provisions	3.5	2	3.5
Otherwise[4]	3	3	3
Steel CBF with V, inverted V, or K bracing			
V or Inverted V bracing per 6th Ed. SBC[2]	3	3	3
V or Inverted V bracing, otherwise[4]	3	3	3
K bracing	1.25	1.25	1.25
Reinforced concrete shear walls with boundary elements and without coupling beams, in accordancre with Sec. 1113.5.1.4a of 5th Ed. SBC	5	2.5	5
Reinforced concrete shear walls with reinforcing steel less than required by, or spaced further apart than, that required in Sec. 11.10.9 of ACI 318	1.5	1.5	1.5
Unreinforced concrete shear walls	1.25	1.25	1.25
Reinforced masonry shear walls classified in accordance with Section 3408.10.2.1			
Class A	4.5	2.5	3.5
Class B	2.25	2.25	2.25
Class C	1.25	1.25	1.25
Unreinforced masonry shear walls	1.25	1.25	1.25
Light-framed walls sheathed with wood structural panels or diagonal sheathing	4	2.5	3
Other light-framed walls sheathed with materials permitted in Section 3408.10.6	2	2	2
Building Frame Systems			
Steel concentrically braced frame (CBF) with diagonal[3] or X-bracing			
CBF per 6th Ed SBC[2] except Sect 9.5 of AISC 1992 Seismic Provisions	4	2	3.5
Otherwise[4]	3	3	3
Steel CBF with V, inverted V, or K bracing			
V or Inverted V bracing per 6th Ed. SBC[2]	3	3	3
V or Inverted V bracing, otherwise[4]	3	3	3
K bracing	1.5	1.5	1.5

TABLE 3408-1
Design Coefficients and Factors for Seismic Force Resisting Systems Not Permitted by Code Requirements for New Construction

Basic Seismic Force Resisting System[1]	Respense Modification Coefficient, R	System Overstrength Factor, Ωo	Deflection Amplification Factor, Cd
Reinforced concrete shear walls with boundary elements and without coupling beams, in accordancre with Sec. 1113.5.1.4a of 5th Ed. SBC	6	2.5	5
Reinforced concrete shear walls with reinforcing steel less than required by, or spaced further apart than, that required in Sec. 11.10.9 of ACI 318-02	1.5	1.5	1.5
Unreinforced concrete shear walls	1.5	1.5	1.5
Reinforced masonry shear walls classified in accordance with Section 3408.10.2.1			
Class A	5	2.5	4
Class B	2.25	2.25	2.25
Class C	1.5	1.5	1.5
Unreinforced masonry shear walls	1.5	1.5	1.5
Light-framed walls sheathed with wood structural panels or diagonal sheathing	4	2.5	3
Other light-framed walls sheathed with materials permitted in Section 3408.10.6	2.5	2.5	2.5
Moment Resisting Frame Systems			
Steel moment frames			
Special Moment Frame per 6th Ed. SBC[2]	8	3	5.5
Ordinary Moment Frame per 6th Ed. SBC[2]	3.5	3.5	3.5
Moment frame, otherwise[4]	3	3	3
Reinforced concrete moment frames classified in accordance with Section 3408.10.2.2			
Class A	5	3	4.5
Class B	2.5	2.5	2.5
Dual Systems (See Section 9.5.2.2.1 of ASCE 7)			
Steel concentrically braced frame (CBF) with steel moment frames (MF)			
CBF and Special MF, per 6th Ed. SBC[2]	5	2.5	4.5
CBF and MF, per 1st-5th Ed. SBC[2], except V, Inverted V, or K Bracing	3.5	2.5	3.5
CBF and MF, per 1st-5th Ed. SBC[2], with V or Inverted V Bracing	3	2.5	3
Otherwise	1.5	1.5	1.5
Reinforced concrete shear walls with boundary elements and without coupling beams, in accordancre with Sec. 1113.5.1.4a of 5th Ed. SBC, with reinforced concrete moment frames in accordance with Section 3408.10.2.2, Class A.	6	2.5	5

TABLE 3408-1
Design Coefficients and Factors for Seismic Force Resisting Systems Not Permitted by Code Requirements for New Construction

Basic Seismic Force Resisting System[1]	Respense Modification Coefficient, R	System Overstrength Factor, Ωo	Deflection Amplification Factor, Cd
Ordinary reinforced concrete shear wall, as defined in 7th Ed. SBC, with reinforced concrete moment frames in accordance with Section 3408.10.2.2, Class A	5.5	2.5	4.5

Notes

1. Systems of previous editions of the State Building Code that meet the ductility requirements of the 7th Edition of the Code are not included in this table.
2. SBC = State Building Code.
3. A diagonal brace is one that frames from a beam to column connection diagonally to another beam to column connection or to a column at its base plate.
4. The seismic resistance of the frame shall be based on its seismic connections being subject to two times the computed forces and moments resulting from seismic load.