## CHAPTER 15 SEISMIC DESIGN REQUIREMENTS FOR NONBUILDING STRUCTURES

Table 15.4-2 Seismic Coefficients for Nonbuilding Structures not Similar to Buildings

Nonbuilding Structure Type	Detailing Requirements <sup>c</sup>	R	$\Omega_0$	$C_d$	Structural Height, $h_n$ , Limits $(ft)^{ad}$				
					В	С	D	Е	F
Elevated tanks, vessels, bins or hoppers									
On symmetrically braced legs (not similar to buildings)	15.7.10	3	$2^b$	2.5	NL	NL	160	100	100
On unbraced legs or asymmetrically braced legs (not similar buildings)	15.7.10	2	$2^b$	2.5	NL	NL	100	60	60
Horizontal, saddle supported welded steel vessels	15.7.14	3	$2^b$	2.5	NL	NL	NL	NL	NL
Tanks or vessels supported on structural towers similar to buildings	15.5.5	Use values for the appropriate structure type in the categories for building frame systems and moment resisting frame systems listed in Table 12.2-1 or Table 15.4-1.							
Flat-bottom ground-supported tanks:	15.7								
Steel or fiber-reinforced plastic:									
Mechanically anchored		3	$2^b$	2.5	NL	NL	NL	NL	NL
Self-anchored		2.5	$2^b$	2	NL	NL	NL	NL	NL
Reinforced or prestressed concrete:									
Reinforced nonsliding base		2	$2^b$	2	NL	NL	NL	NL	NL
Anchored flexible base		3.25	$2^b$	2	NL	NL	NL	NL	NL
Unanchored and unconstrained flexible base		1.5	1.5 <sup>b</sup>	1.5	NL	NL	NL	NL	NL
All other		1.5	$1.5^{b}$	1.5	NL	NL	NL	NL	NL
Cast-in-place concrete silos having walls continuous to the foundation	15.6.2	3	1.75	3	NL	NL	NL	NL	NL
All other reinforced masonry structures not similar to buildings detailed as intermediate reinforced masonry shear walls	14.4.1 <sup>f</sup>	3	2	2.5	NL	NL	50	50	50
All other reinforced masonry structures not similar to buildings detailed as ordinary reinforced masonry shear walls	14.4.1	2	2.5	1.75	NL	160	NP	NP	NP
All other nonreinforced masonry structures not similar to buildings	14.4.1	1.25	2	1.5	NL	NL	NP	NP	NP
Concrete chimneys and stacks	15.6.2 and ACI 307	2	1.5	2.0	NL	NL	NL	NL	NL