CODE

23.11.3.2 Struts shall be reinforced with a minimum of four longitudinal bars with a bar in each corner of the transverse reinforcement. Transverse reinforcement shall be placed perpendicular to the direction of the strut and satisfy (a) through (d):

(a) Detailed in accordance with 18.7.5.2(a) through (e)
(b) A_{sh}/sb_c determined in accordance with Table 23.11.3.2(a)
(c) Spacing satisfying 18.7.5.3(d) and not exceeding the values specified in Table 23.11.3.2(b)
(d) Continued through the nodal zone

Table 23.11.3.2(a)—Transverse reinforcement for struts[1][2]

Transverse reinforcement	Applicable expressions		
A_{sh}/sb_c for rectilinear hoops	Greater of	$0.3\left(\frac{A_{cs}}{A_{ch}}-1\right)\frac{f'_c}{f_{yt}}$	(a)
		$0.09\frac{f'_c}{f_{yt}}$	(b)

[1]A_{ch} is measured to the outside edges of the transverse reinforcement for the strut.

[2]It shall be permitted to configure hoops using two pieces of reinforcement as specified in 18.6.4.3.

Table 23.11.3.2(b)—Transverse reinforcement spacing limitation

Reinforcement	Maximum transverse bar spacing	
Grade 420	Lesser of	$6d_b$
		150 mm
Grade 550	Lesser of	$5d_b$
		150 mm
Grade 690	Lesser of	$4d_b$
		150 mm

Table 23.11.3.3—Transverse reinforcement for the entire member cross section

Transverse reinforcement	Applicable expressions		
A_{sh}/sb_c for rectilinear hoops	Greater of	$0.3\left(\frac{A_g}{A_{ch}}-1\right)\frac{f'_c}{f_{yt}}$	(a)
		$0.09\frac{f'_c}{f_{yt}}$	(b)

23.11.3.3 Transverse reinforcement shall be provided in each orthogonal direction and through the thickness of the

COMMENTARY

Expressions (a) and (b) in Table 23.11.3.2(a) are the same as those in Table 18.7.5.4 for columns of special moment frames with the exception of A_{cs} substituted for A_g.