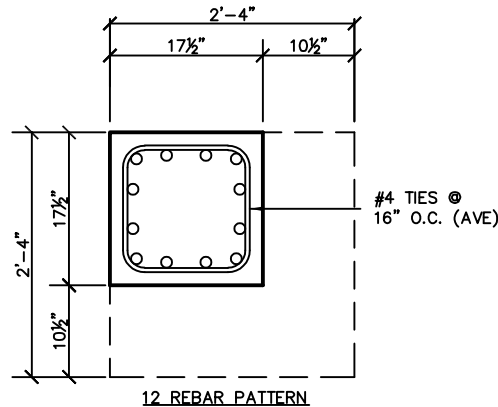
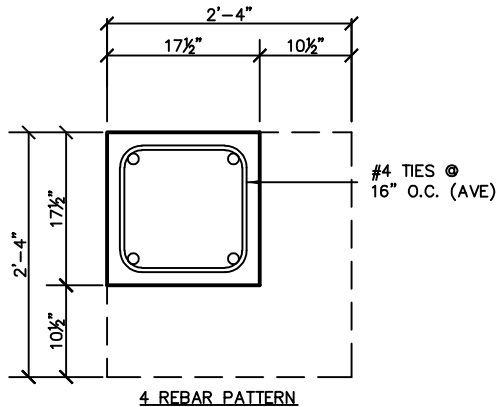


Reinforced Concrete Square Column 17.5C17.5

PHYSICAL PROPERTIES

$A = 306 \text{ in.}^2$ $S_b = 893 \text{ in.}^3$
 $I = 7,816 \text{ in.}^4$ $S_t = 893 \text{ in.}^3$
 $Y_b = 8.75 \text{ in.}$ $Wt. = 319 \text{ PLF}$
 $Y_t = 8.75 \text{ in.}$

The values reflected in the table below result from carving out a conventional 28C28 corner column with recesses to support 10" thick spandrel panels and 1/2" neoprene spacer pads at the tie-back connections to the column.



DESIGN DATA

1. Precast Strength @ 28 days = 6,000 PSI
2. Precast Density = 150 PCF
3. Slenderness effects were not considered when determining the allowable factored loads in this table.
4. Correction factor $C_m = 1.00$ was assumed when determining the allowable factored loads in this table.
5. Sustained load ratio $\beta_d = 0.65$ was assumed when determining the allowable factored loads in this table.
6. Minimum allowable eccentricity $e = 0.60 + 0.03h$. Typical $e = 14.25$ " for 10" spandrel loading.
8. Ties shown are graphical only. More ties might be required to meet ACI 318 requirements.
9. These corner columns are often subjected to bi-axial bending. Bi-axial bending has not been considered in this table.

ALLOWABLE FACTORED LOADS (P_u)													IBC 2012 & ACI 318-11 (1.2 D + 1.6 L)	
Rebar Pattern	ECCENTRICITY (INCHES)													
	0"	1.125"	2"	4"	6"	8"	10"	12"	14"	14.25"	16"	18"	20"	
4 - #8	902 K	902 K	868 K	634 K	455 K	350 K	296 K	214 K	163 K	158 K	130 K	108 K	92 K	
4 - #9	926 K	926 K	890 K	654 K	477 K	363 K	311 K	253 K	194 K	188 K	156 K	130 K	112 K	
4 - #10	957 K	957 K	918 K	679 K	502 K	387 K	325 K	281 K	231 K	225 K	188 K	157 K	135 K	
12 - #8	1,082 K	1,082 K	1,025 K	746 K	556 K	437 K	362 K	316 K	278 K	273 K	247 K	224 K	203 K	
12 - #9	1,154 K	1,154 K	1,090 K	795 K	599 K	474 K	391 K	339 K	299 K	295 K	267 K	241 K	219 K	
12 - #10	1,247 K	1,247 K	1,171 K	855 K	649 K	519 K	430 K	367 K	325 K	320 K	291 K	262 K	239 K	