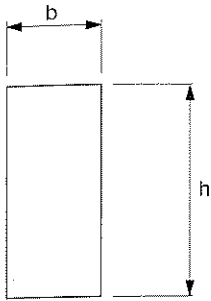


RECTANGULAR BEAMS

Normal Weight Concrete



$f'_c = 5,000$ psi
 $f_{pu} = 270,000$ psi
 1/2 in. diameter
 low-relaxation strand

Section Properties							
Designation	b in.	h in.	A in ²	I in ⁴	y _b in.	S in ³	wt plf
12RB16	12	16	192	4,096	8.00	512	200
12RB20	12	20	240	8,000	10.00	800	250
12RB24	12	24	288	13,824	12.00	1,152	300
12RB28	12	28	336	21,952	14.00	1,568	350
12RB32	12	32	384	32,768	16.00	2,048	400
12RB36	12	36	432	46,656	18.00	2,592	450
16RB24	16	24	384	18,432	12.00	1,536	400
16RB28	16	28	448	29,269	14.00	2,091	467
16RB32	16	32	512	43,691	16.00	2,731	533
16RB36	16	36	576	62,208	18.00	3,456	600
16RB40	16	40	640	85,333	20.00	4,267	667

1. Check local area for availability of other sizes.
2. Safe loads shown include 50% superimposed dead load and 50% live load. 800 psi top tension has been allowed, therefore additional top reinforcement is required.
3. Safe loads can be significantly increased by use of structural composite topping.

Key

- 3.344 — Safe superimposed service load, plf
- 0.4 — Estimated camber at erection, in.
- 0.1 — Estimated long-time camber, in.

Table of safe superimposed service load (plf) and cambers

Designation	No. Strand	e	Span, ft																		
			16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
12RB16	5	5.67	3344	2605	2075	1684	1386	1154	970												
			0.4	0.5	0.6	0.7	0.8	0.9	1.0												
			0.1	0.2	0.2	0.2	0.2	0.2	0.2												
12RB20	8	6.60	6101	4773	3823	3121	2585	2166	1833	1565	1345	1163	1010								
			0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4								
			0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3							
12RB24	10	7.76	8884	6957	5578	4558	3782	3178	2699	2312	1996	1734	1514	1328	1170	1033					
			0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6					
			0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4				
12RB28	12	8.89	9502	7630	6245	5192	4372	3721	3197	2767	2411	2113	1861	1645	1460	1299	1159	1035			
			0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7				
			0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
12RB32	13	10.48	8238	6859	5785	4933	4246	3683	3217	2826	2495	2213	1970	1760	1576	1415	1272				
			0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6				
			0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	
12RB36	15	11.64	8734	7376	6298	5428	4716	4126	3632	3214	2856	2549	2283	2050	1846	1666					
			0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.5					
			0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
16RB24	13	7.86	9278	7439	6079	5044	4239	3600	3084	2662	2313	2020	1772	1560	1378	1220	1082	961			
			0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.8			
			0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2		
16RB28	13	8.89	9022	7383	6137	5167	4397	3776	3267	2846	2493	2194	1939	1720	1530	1364	1218	1089			
			0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.3	1.3		
			0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	
16RB32	18	10.29	9145	7713	6577	5661	4911	4289	3768	3327	2951	2627	2346	2101	1886	1697					
			0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.7					
			0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
16RB36	20	11.64	9834	8397	7237	6288	5502	4843	4285	3809	3399	3043	2733	2461	2221						
			0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.5						
			0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
16RB40	22	13.00	9010	7839	6867	6054	5365	4777	4271	3832	3449	3113	2817								
			0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.4								
			0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	