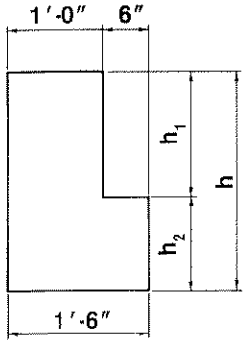
L-SHAPED BEAMS



f'_c = 5000 psi

f_{pu} = 270,000 psi

Normal Weight Concrete

Designation	h (in.)	h_1/h_2 (in.)	A (in.²)	I (in.⁴)	y_b (in.)	Z_b (in.³)	Z_t (in.³)	wt (plf)
			Section Properties					
18LB20	20	12/8	288	9696	9.00	1077	882	300
18LB24	24	12/12	360	16,762	10.80	1552	1270	375
18LB28	28	16/12	408	26,611	12.59	2114	1727	425
18LB32	32	20/12	456	39,695	14.42	2753	2258	475
18LB36	36	24/12	504	56,407	16.29	3463	2862	525
18LB40	40	24/16	576	77,568	18.00	4309	3526	600
18LB44	44	28/16	624	103,153	19.85	5197	4271	650
18LB48	48	32/16	672	133,705	21.71	6159	5086	700
18LB52	52	36/16	720	169,613	23.60	7187	5972	750
18LB56	56	40/16	768	211,264	25.50	8285	6927	800
18LB60	60	44/16	816	259,046	27.41	9451	7949	850

Key
- 6486 — Safe superimposed service load, plf
- 0.3 — Estimated camber at erection, in.
- 0.1 — Estimated long-time camber, in.

Safe loads shown include 50% dead load and 50% live load. 800 psi top tension has been allowed, therefore additional top reinforcement is required.

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
18LB20	9	6.26	6486 0.3 0.1	5068 0.4 0.1	4053 0.5 0.1	3303 0.6 0.2	2732 0.7 0.2	2288 0.8 0.2	1935 0.9 0.2	1650 0.9 0.2	1414 1.0 0.2	1218 1.1 0.2	1054 1.2 0.1							
18LB24	10	7.67	9179 0.3 0.1	7182 0.3 0.1	5753 0.4 0.1	4696 0.5 0.1	3891 0.5 0.1	3266 0.6 0.1	2769 0.7 0.1	2369 0.8 0.1	2041 0.8 0.1	1769 0.9 0.1	1541 1.0 0.1	1349 1.0 0.0	1184 1.1 0.0					
18LB28	12	8.93			8039 0.3 0.1	6578 0.4 0.1	5466 0.5 0.1	4600 0.6 0.1	3914 0.6 0.2	3360 0.7 0.2	2906 0.8 0.2	2531 0.8 0.2	2216 0.9 0.1	1949 1.0 0.1	1722 1.0 0.1	1524 1.1 0.1	1351 1.1 0.0	1200 1.2 0.0		
18LB32	14	10.22				8814 0.4 0.1	7331 0.4 0.1	6176 0.5 0.1	5260 0.6 0.2	4521 0.7 0.2	3916 0.7 0.2	3414 0.8 0.2	2994 0.9 0.2	2639 0.9 0.2	2335 1.0 0.2	2074 1.1 0.2	1847 1.1 0.1	1650 1.2 0.1	1476 1.2 0.1	1323 1.3 0.0
18LB36	16	11.52					9358 0.4 0.1	7903 0.5 0.1	6744 0.5 0.1	5807 0.6 0.1	5040 0.7 0.2	4405 0.7 0.2	3872 0.8 0.2	3422 0.9 0.2	3037 0.9 0.2	2706 1.0 0.2	2419 1.1 0.2	2168 1.1 0.1	1948 1.2 0.1	1755 1.2 0.1
18LB40	18	12.52						9693 0.4 0.1	8284 0.5 0.1	7146 0.5 0.2	6215 0.6 0.2	5443 0.7 0.2	4797 0.7 0.2	4250 0.8 0.2	3783 0.9 0.2	3380 0.9 0.2	3026 1.0 0.2	2718 1.0 0.2	2447 1.1 0.2	2208 1.1 0.2
18LB44	19	14.19								8729 0.5 0.1	7601 0.6 0.2	6666 0.6 0.2	5883 0.7 0.2	5219 0.7 0.2	4653 0.8 0.2	4166 0.9 0.2	3743 0.9 0.2	3370 1.0 0.2	3042 1.0 0.2	2752 1.1 0.2
18LB48	21	15.48									9166 0.5 0.1	8048 0.6 0.1	7110 0.6 0.1	6313 0.7 0.2	5629 0.8 0.2	5041 0.8 0.2	4531 0.9 0.2	4086 0.9 0.2	3695 1.0 0.2	3351 1.0 0.2
18LB52	23	16.78										9538 0.5 0.2	8427 0.6 0.2	7486 0.7 0.2	6683 0.7 0.2	5992 0.8 0.2	5393 0.8 0.2	4871 0.9 0.2	4412 0.9 0.2	4007 1.0 0.2
18LB56	25	18.07											9842 0.6 0.2	8752 0.6 0.2	7820 0.7 0.2	7019 0.7 0.2	6324 0.8 0.2	5718 0.8 0.2	5186 0.9 0.2	4717 1.0 0.2
18LB60	27	19.36													9026 0.6 0.2	8116 0.7 0.2	7326 0.7 0.2	6630 0.8 0.2	6020 0.9 0.2	5481 0.9 0.2