

# Prestressed Beam Load Table

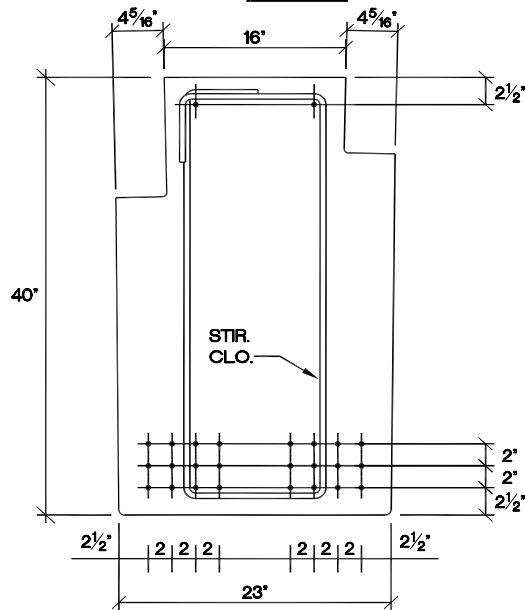
# 24IT40 Beam

Safe Load Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED SERVICE LOAD IN KLF

# strand	Strand Area	$\phi Mn$ (k-ft)	Span Length (ft)												
			16	18	20	22	24	26	28	30	32	34	36	38	40
24	3.672	2127.53	18.71	16.56	14.83	13.42	12.25	11.25	10.40	9.66	9.02	8.01	7.05	6.23	5.54
22	3.366	1994.24	18.81	16.65	14.91	13.50	12.32	11.32	10.46	9.72	8.60	7.51	6.60	5.83	5.17
20	3.060	1855.73	18.93	16.75	15.01	13.58	12.40	11.39	10.53	9.26	8.03	7.01	6.15	5.43	4.81
18	2.754	1711.83	19.08	16.89	15.13	13.69	12.50	11.48	10.03	8.62	7.46	6.51	5.71	5.03	4.45
16	2.448	1562.40	19.27	17.05	15.28	13.83	12.62	10.87	9.28	7.98	6.90	6.01	5.26	4.63	4.09
14	2.142	1394.96	19.35	17.12	15.34	13.73	11.43	9.63	8.21	7.07	6.13	5.35	4.70	4.15	3.68
12	1.836	1221.64	19.45	17.22	14.59	11.94	9.92	8.35	7.11	6.10	5.28	4.60	4.03	3.55	3.13
10	1.530	1042.29	19.60	15.40	12.35	10.08	8.36	7.03	5.96	5.11	4.41	3.82	3.34	2.93	2.57
8	1.224	856.75	16.05	12.54	10.03	8.17	6.75	5.65	4.78	4.08	3.50	3.02	2.62	2.28	1.99
6	0.918	652.48	12.06	9.39	7.47	6.06	4.98	4.14	3.48	2.94	2.50	2.14	1.83	1.58	1.36

Beam Shear Capacity Limited by #4 stirrups @ 6" O.C.



$A = 862.64 \text{ in}^2$   
 $b_w = 16.625 \text{ in}$   
 $I_g = 101354 \text{ in}^4$   
 $y_b = 18.45 \text{ in}$

**NOTES:**

- 1) Concrete Strengths:  $f'_{ci} = 3500 \text{ psi}$ ,  $f'_c = 9000 \text{ psi}$ .
- 2) Strand: 270 ksi, Low Relaxation, 1/2" Diameter.
- 3) Tabulated loads are based on  $U=1.2D+1.6L$  and with all load superimposed on the section considered as live load.
- 4) Stresses at release require top reinforcement in most cases.
- 5) Beam sizes can have either 8", 10", 12" or 16" ledges which are covered by the load table.
- 6) Section properties shown are based on 12" ledges both sides.
- 7) Values in shaded area are controlled by limitations of steel shear reinforcing.
- 8) Tabulated loads do not account for torsional loading of beam which may require more in-depth analysis.
- 9) For conditions not covered on this load table contact, Molin Concrete Products, Engineering Division.
- 10) Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI) 318".



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