

Composite Design Safe Load Table



PRESTRESSED CONCRETE SLAB

See instructions on back side of sheet for using this table.

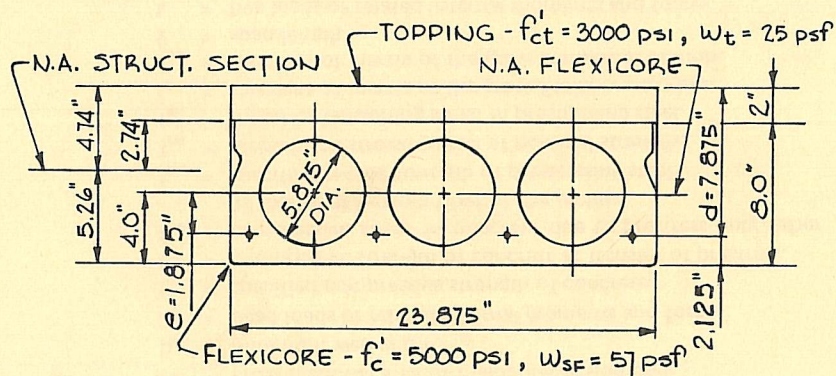
**8" x 24" SECTION PLUS
2" STRUCTURAL TOPPING**

UNIFORMLY DISTRIBUTED SUPERIMPOSED* LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M in Ft.-Kips per Unit	ϕM_n in Ft.-Kips per Unit	Span Length (L) in Ft.																		
					15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
T824C-D58	4-1/2	0.576	45.11	67.91	433	402	374	350	328	308	284	255	226	199	174	152	133	116	100	86	73	62	51
T824C-D50	2-1/2 & 2-7/16	0.504	40.77	61.53	432	401	373	349	323	288	255	222	194	169	146	127	109	93	79	67	55	45	
T824C-D43	4-7/16	0.432	36.43	54.27	430	399	371	326	286	250	216	186	161	138	119	101	85	71	59	47			
T824C-D38	2-7/16 & 2-3/8	0.376	33.05	48.27	419	376	325	283	247	216	185	159	135	115	97	81	67	54	43				
T824C-D32	4-3/8	0.320	29.68	41.97	371	318	274	237	206	179	155	131	110	92	75	61	48						
T824C-D29	2-1/2	0.288	27.75	38.22	323	284	244	210	182	157	136	115	95	78	63	50							
T824C-D28	2-3/8 & 2-5/16	0.276	27.03	36.79	317	271	232	200	172	149	129	109	90	73	58	45							

*TABULATED LOADS ARE BASED ON $U = 1.4D + 1.7L$ AND WITH ALL LOAD SUPERIMPOSED ON THE STRUCTURAL SECTION CONSIDERED AS LIVE LOAD. (ALSO SEE NOTE 6)

PHYSICAL PROPERTIES OF STRUCTURAL SECTION AND SPECIFICATIONS



$$A = 109.7 \text{ in.}^2 \quad I_g = 843.2 \text{ in.}^4 \quad f'_c = 5000 \text{ psi} \quad f_{pu} = 250 \text{ ksi}$$

$$b_w = 6.25 \text{ in.} \quad I_{gc} = 1547.1 \text{ in.}^4 \quad f'_{ci} = 3500 \text{ psi} \quad f_{si} = 175 \text{ ksi}$$

NOTES:

- Grouted weight of structural unit is 82 psf or 164 plf based on concrete unit weight of 150 pcf.
- Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI 318-77)."
- For spans in shaded area consult your local manufacturer.
- No shear reinforcement is required for the tabulated loads.
- Tabulated loads to the left of solid stepped line are controlled by shear strength of the concrete. Shear reinforcement may be added to increase the safe loads.
- Tabulated loads to the right of dashed stepped line are controlled by permissible flexural tension at service loads.
- Tabulated load in italics is controlled by bond.
- For longer spans and conditions not covered in the load table, consult your local manufacturer.