

Composite Design Safe Load Table



PRESTRESSED CONCRETE SLAB

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

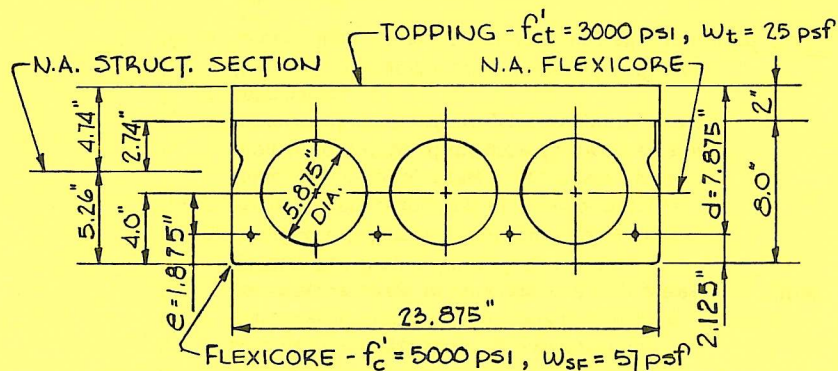
**8" x 24" SECTION PLUS
2" STRUCTURAL TOPPING**

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



$A = 109.7 \text{ in.}^2$	$I_g = 843.2 \text{ in.}^4$	$f'_c = 5000 \text{ psi}$	$f_{pu} = 250 \text{ ksi}$
$b_w = 6.25 \text{ in.}$	$I_{gc} = 1547.1 \text{ in.}^4$	$f'_{ci} = 3500 \text{ psi}$	$f_{si} = 175 \text{ ksi}$

NOTES:

1. Grouted weight of structural unit is 82 psf or 164 plf based on concrete unit weight of 150 pcf.
2. Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI 318-83)."
3. For spans in shaded area consult your local manufacturer.
4. No shear reinforcement is required for the tabulated loads.
5. 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.
6. Tabulated loads to the right of dashed stepped line are controlled by permissible flexural tension at service loads.
7. Tabulated load in italics is controlled by bond.
8. For longer spans and conditions not covered in the load table, consult your local manufacturer.

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