

SINGLE TEE TYPE "A" LOAD TABLE

8ST 36

Table of safe superimposed live load (psf)

Normal Weight Concrete

No Topping

8'-0" x 36" Single Tee

Strand Pattern	Span, ft																							
	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	
108-S	79*	69*	61*	54*	47*	40*	35*																	
88-D1	79*	70*	62*	54*	47*	41*	35*	30*																
108-D1		101*	91*	81*	73*	65*	58*	51*	45*	40*	35*													
128-D1				104*	94*	85*	77*	69*	62*	56*	50*	44*	39*	34*										
148-D1					104*	95*	86*	78*	71*	64*	58*	52*	47*	42*	37*									
168-D1							103*	94*	86*	79*	72*	65*	59*	54*	48									
188-D1										92*	85*	78*	71*	65	58									
208-D1																68	62	56	50	45	40	36		
228-D1																		58	53	48	43	38		
Dead Load	f_t	434	464	496	528	562	596	632	669	706	745	785	826	868	910	954	999	1045	1092	1140	1189	1239	1291	1343
	f_b	-1130	-1210	-1292	-1376	-1464	-1554	-1647	-1742	-1840	-1941	-2045	-2151	-2260	-2371	-2486	-2603	-2722	-2845	-2970	-3097	-3228	-3361	-3497
	a	0.612	0.700	0.799	0.907	1.026	1.156	1.298	1.452	1.621	1.803	2.001	2.214	2.444	2.691	2.956	3.241	3.546	3.872	4.220	4.590	4.985	5.405	5.850
100 plf Live Load	f_t	73	78	83	89	94	100	106	112	119	125	132	139	146	153	160	168	176	184	192	200	208	217	226
	f_b	-190	-203	-217	-231	-246	-261	-277	-293	-310	-326	-344	-362	-380	-399	-418	-438	-458	-479	-500	-521	-543	-566	-588
	a	0.086	0.099	0.113	0.128	0.145	0.163	0.183	0.205	0.228	0.254	0.282	0.312	0.344	0.379	0.417	0.457	0.500	0.546	0.595	0.647	0.702	0.762	0.824

*Capacity governed by ultimate strength

Values below heavy line require release strengths higher than 3500 psi

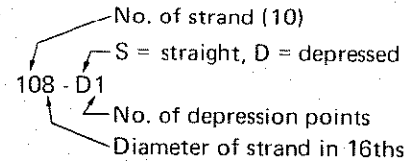
$f'_c = 5000$ psi

$f_{pu} = 270,000$ psi

Notation

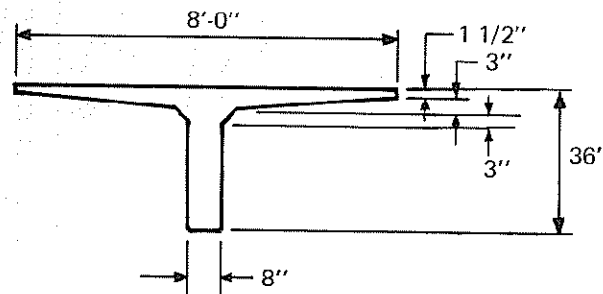
- f_t = top fiber stress, psi (after assumed 22% loss)
- f_b = bottom fiber stress, psi (after assumed 22% loss)
- a = center deflection, in.
- $0.001 l^2 \alpha$ = initial center camber, in. (after assumed 10% loss)
- l = span (ft)
- M_u = ult. moment capacity, in.-kips

Strand Pattern Designation



Section Properties

- A = 570 in.²
- I = 68,917 in.⁴
- Y_b = 26.01 in.
- Y_t = 9.99 in.
- Z_b = 2650 in.³
- Z_t = 6899 in.³
- wt = 594 plf
- 74 psf



Strand Pattern	Eccentricity in.		Prestress alone					M_u
			end		center		α	
	end	ctr	f_t	f_b	f_t	f_b		
108-S	16.81	16.81	-154	1827	-154	1827	0.319	9627
88-D1	18.01	23.26	-154	1544	-292	1901	0.326	9675
108-D1	16.81	23.01	-154	1827	-356	2355	0.397	11,933
128-D1	13.01	22.76	-35	1805	-418	2801	0.444	13,809
148-D1	10.58	22.51	69	1816	-476	3238	0.492	15,641
168-D1	8.76	22.26	174	1827	-531	3667	0.539	17,415
188-D1	7.12	22.01	293	1804	-583	4087	0.582	19,100
208-D1	5.81	21.76	411	1781	-631	4499	0.624	20,728
228-D1	4.56	21.51	543	1724	-677	4902	0.662	22,268

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No Topping
8'-0" x 36" Single Tee

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