

DOUBLE TEE

TYPE "A" LOAD TABLE

8DT 18

Table of safe superimposed live load (psf)

Normal Weight Concrete

No Topping

8'-0" x 18" Double Tee

Strand Pattern	Span, ft																						
	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	
28-S	107*	82*	63*	48*	36*	27*																	
48-S				99*	80*	65*	53*	42*	34*	26*													
68-S						102*	85*	71*	59*	49*	41*	34*	27*										
68-D1								103*	88*	75*	64*	55*	46*	39*	33*								
88-D1									103*	90*	78*	68*	59*	51*	44*	38*	32*	27*					
108-D1											103*	90*	78*	68*	59*	51*	44*	38*	32*	27*	34	28	24
Dead Load	f_t	109	132	157	184	214	246	279	316	354	394	437	482	529	578	629	683	739	797	857	919	984	1050
	f_b	-306	-371	-441	-518	-601	-690	-785	-886	-993	-1107	-1227	-1352	-1484	-1622	-1767	-1917	-2073	-2236	-2405	-2580	-2761	-2948
	a	0.039	0.057	0.080	0.110	0.149	0.196	0.253	0.323	0.406	0.504	0.619	0.752	0.906	1.082	1.283	1.511	1.767	2.055	2.377	2.735	3.133	3.572
100 plf Live Load	f_t	30	36	43	51	59	68	78	88	98	110	122	134	147	161	175	190	206	222	239	256	274	293
	f_b	-85	-103	-123	-144	-167	-192	-219	-247	-277	-309	-342	-377	-414	-452	-493	-535	-578	-624	-671	-720	-770	-822
	a	0.009	0.013	0.019	0.026	0.035	0.046	0.059	0.075	0.095	0.118	0.144	0.176	0.212	0.253	0.300	0.353	0.413	0.480	0.555	0.639	0.731	0.834

*Capacity governed by ultimate strength

Values below heavy line require release strengths higher than 3500 psi

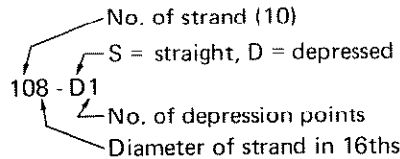
$f'_c = 5000$ psi

$f_{pu} = 270,000$ 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

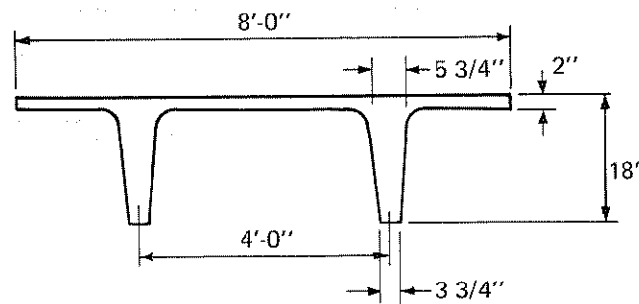
Strand Pattern Designation



Section Properties

- A = 344 in.²
- I = 9300 in.⁴
- y_b = 13.27 in.
- y_t = 4.73 in.
- Z_b = 701 in.³
- Z_t = 1966 in.³
- wt = 358 plf
- 45 psf

Strand Pattern	Eccentricity in.		Prestress alone				α	M_u
			end		center			
	end	ctr	f_t	f_b	f_t	f_b		
28-S	11.27	11.27	-127	857	-127	857	0.317	1177
48-S	8.27	8.27	-117	1327	-117	1327	0.465	1879
68-S	7.27	7.27	-107	1798	-107	1798	0.613	2556
68-D1	7.27	10.77	-107	1798	-348	2474	0.810	3313
88-D1	4.77	10.52	86	1753	-441	3235	0.967	4145
108-D1	3.27	10.27	280	1709	-522	3963	1.115	4919



Normal Weight Concrete
No Topping
8'-0" x 18" Double Tee

8DT 18