DOUBLE TEE

TYPE "A" LOAD TABLE

8DT 24+2

Table of safe superimposed live load (psf) — **Normal Weight Concrete** — **2" Normal Weight Topping** — **8'-0" x 24" Double Tee**

Strand Pattern		Span, ft 24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66
48-S		194*	156*	126*	101*	81*	65*	51*	39*	29*													
68-S				193*	160*	133*	110*	91*	75*	62*	50*	40*	31*										
88-S					208*	175*	148*	125*	106*	89*	75*	62*	52*	42*	34*	26							
68-D1						177*	150*	127*	107*	90*	76*	64*	53*	43*	35*	27*							
88-D1								182*	157*	135*	117*	101*	87*	74*	63*	54*	45*	38*	30				
108-D1												132*	116*	101*	88*	76*	66*	57*	48	39	30		
128-D1																			65	55	46	37	29
Dead Load	f_t	174	204	237	272	309	349	391	436	483	533	585	639	696	756	817	881	948	1017	1088	1162	1238	1317
	f_b	−436	−511	−593	−681	−775	−875	−981	−1093	−1211	−1335	−1466	−1602	−1744	−1893	−2047	−2208	−2374	−2547	−2726	−2910	−3101	−3298
	a	0.058	0.080	0.107	0.142	0.183	0.234	0.294	0.365	0.448	0.544	0.656	0.783	0.928	1.093	1.279	1.487	1.720	1.979	2.267	2.584	2.934	3.319
100 plf Live Load	f_t	14	17	20	23	26	29	33	36	40	45	49	54	58	63	69	74	80	86	92	98	104	111
	f_b	−60	−70	−81	−93	−106	−120	−135	−150	−166	−183	−201	−220	−240	−260	−282	−304	−327	−350	−375	−400	−427	−454
	a	0.006	0.009	0.012	0.015	0.020	0.025	0.032	0.039	0.048	0.059	0.071	0.085	0.101	0.118	0.138	0.161	0.186	0.214	0.245	0.280	0.318	0.359

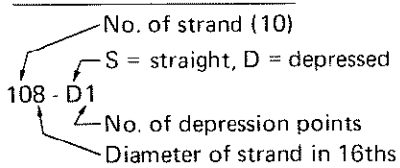
*Capacity governed by ultimate strength — Values below heavy line require release strengths higher than 3500 psi — f'_c = 5000 psi — f_{pu} = 270,000 psi

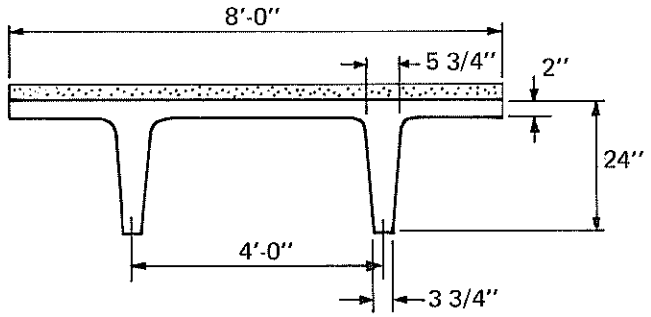
Notation

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

Strand Pattern	Eccentricity in. end	Eccentricity in. ctr	Prestress alone end f_t	Prestress alone end f_b	Prestress alone center f_t	Prestress alone center f_b	α	M_u
48-S	12.15	12.15	−132	1121	−132	1121	0.303	3033
68-S	10.48	10.48	−125	1497	−125	1497	0.392	4111
88-S	9.15	9.15	−89	1800	−89	1800	0.449	4997
68-D1	10.48	14.65	−125	1497	−309	1959	0.496	5040
88-D1	9.15	14.40	−89	1800	−398	2575	0.630	6505
108-D1	6.75	14.15	65	1807	−479	3172	0.728	7755
128-D1	5.15	13.90	220	1815	−553	3752	0.821	8931

Strand Pattern Designation





Section Properties

I = 27,720 in.^{4}
y_b = 19.27 in.
y_t = 6.73 in.
Z_b = 1439 in.^{3}
Z_t = 4119 in.^{3}
wt = 618 plf
77 psf

See preceding page for untopped section properties.

Normal Weight Concrete
2" Normal Weight Topping
8'-0" x 24" Double Tee

8DT 24+2