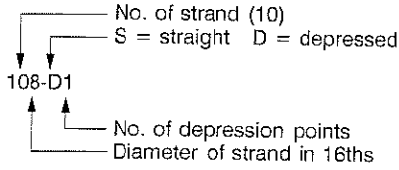


Strand Pattern Designation



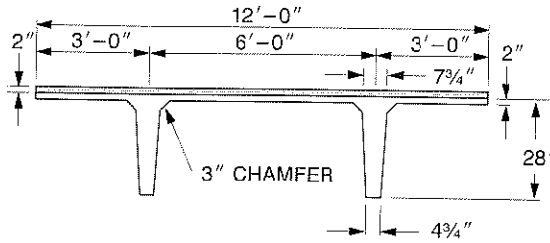
Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

Key

- 137 — Safe superimposed service load, psf
- 0.8 — Estimated camber at erection, in.
- 1.1 — Estimated long-time camber, in.

DOUBLE TEE

12'-0" x 28"
Normal Weight Concrete



Section Properties

	Untopped	Topped
A	= 640 in ²	—
I	= 44,563 in ⁴	57,323 in ⁴
y _b	= 20.21 in.	22.47 in.
y _t	= 7.79 in.	7.53 in.
S _b	= 2,205 in ³	2,551 in ³
S _t	= 5,722 in ³	7,611 in ³
wt	= 667 plf	967 plf
	= 56 psf	81 psf
V/S	= 1.62 in.	

f'_c = 5,000 psi
f_{pu} = 270,000 psi

12DT28

Table of safe superimposed service load (psf) and cambers (in.)

No Topping

Strand Pattern	e _s , in. e _c , in.	Span, ft																							
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	
108-D1	10.02	137	120	105	92	81	71	62	54	47	41	35	30	25											
	17.02	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.5											
		1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.1	0.9	0.8	0.6										
128-D1	8.35	168	148	131	116	103	91	81	71	63	56	49	43	37	32	28									
	16.77	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.6									
		1.4	1.4	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.4	1.2	1.0	0.8									
148-D1	7.16	198	175	156	139	123	110	98	88	78	70	62	55	49	43	38	33	29	25						
	16.52	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.1	1.0	0.8	0.6							
		1.6	1.6	1.7	1.8	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.5	1.3	1.0	0.7						
168-D1	7.02							117	105	94	85	76	68	61	55	49	44	39	34	30	26				
	16.27							1.7	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.7	1.6	1.4	1.3	1.1	0.8				
								2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2	1.8	1.6	1.3	0.9				
188-D1	5.63											88	79	72	65	58	52	47	42	37	33	29	25		
	16.02											2.1	2.1	2.1	2.1	2.0	1.9	1.8	1.7	1.5	1.3	1.0	0.7		
												2.8	2.8	2.8	2.7	2.6	2.5	2.3	2.1	1.8	1.5	1.2	0.8		
208-D1	4.52																67	61	55	49	44	40	36	32	28
	15.77																2.3	2.2	2.1	2.0	1.9	1.7	1.5	1.2	0.9
																	3.0	2.9	2.7	2.5	2.3	2.0	1.7	1.3	0.9

12DT28+2

Table of safe superimposed service load (psf) and cambers (in.)

2" Normal Weight Topping

Strand Pattern	e _s , in. e _c , in.	Span, ft																						
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76				
108-D1	10.02	130	112	96	82	70	59	50	41	34	27													
	17.02	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8													
		0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.4	0.3	0.0													
128-D1	8.35	164	142	124	107	93	81	69	60	51	43	35	29											
	16.77	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.0												
		1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.8	0.7	0.5	0.3	0.0											
148-D1	7.16	196	171	150	132	116	101	89	77	67	58	50	42	36	30									
	16.52	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.3										
		1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.1	0.9	0.7	0.5	0.2	-0.1									
168-D1	7.02							108	95	84	74	65	56	49	42	35	30							
	16.27							1.7	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.7	1.6							
								1.6	1.6	1.5	1.4	1.2	1.1	0.8	0.5	0.2	-0.2							
188-D1	5.63											77	68	60	52	45	39	33	27					
	16.02											2.1	2.1	2.1	2.1	2.0	1.9	1.8	1.7					
												1.5	1.4	1.2	0.9	0.6	0.3	-0.1	-0.6					
208-D1	4.52																55	48	41	34	28			
	15.77																2.3	2.2	2.1	2.0	1.9			
																	1.0	0.6	0.3	-0.2	-0.7			

Strength based on strain compatibility; bottom tension limited to 12√f'_c; see pages 2-2-2-6 for explanation. Shaded values require release strengths higher than 3500 psi.