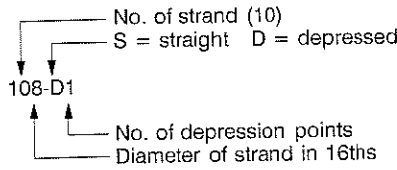


Strand Pattern Designation



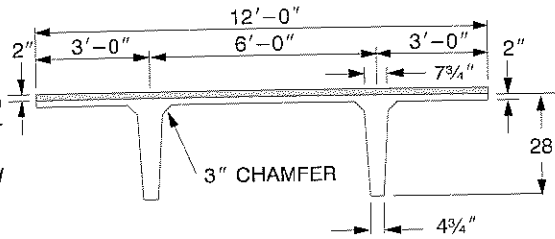
Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

Key

- 148 — Safe superimposed service load, psf
- 1.4 — Estimated camber at erection, in.
- 1.9 — Estimated long-time camber, in.

DOUBLE TEE

12'-0" x 28"
Lightweight Concrete



Section Properties

	Untopped	Topped
A	= 640 in ²	—
I	= 44,563 in ⁴	61,410 in ⁴
y _b	= 20.21 in.	23.19 in.
y _t	= 7.79 in.	6.81 in.
S _b	= 2,205 in ³	2,648 in ³
S _t	= 5,722 in ³	9,015 in ³
wt	= 511 pif	811 pif
	43 psf	68 psf
V/S	= 1.62 in.	

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

12LDT28

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	148	131	116	103	92	82	73	65	58	52	46	41	36	32	28									
	17.02	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.5	1.4									
		1.9	2.0	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.0	1.9								
128-D1	8.35	179	159	142	127	113	102	91	82	74	66	60	54	48	43	39	34	31	27						
	16.77	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.0	1.9	1.7						
		1.2	2.3	2.4	2.6	2.7	2.9	2.9	3.0	3.0	3.0	3.0	3.0	2.9	2.8	2.7	2.6	2.4	2.1						
148-D1	7.16				149	134	121	109	99	89	81	73	66	60	54	49	44	40	36	32	29	26			
	16.52				2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.9	2.9	2.8	2.7	2.6	2.5	2.3	2.1	1.9				
					3.0	3.1	3.3	3.4	3.5	3.6	3.7	3.8	3.8	3.8	3.7	3.6	3.4	3.2	3.1	2.8	2.5	2.2			
168-D1	7.02										96	87	79	72	66	60	54	49	45	41	37	33	30	27	
	16.27										3.3	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.5	3.3	3.2	3.0	2.7	2.4	
											4.4	4.5	4.6	4.6	4.7	4.7	4.6	4.5	4.3	4.1	3.8	3.5	3.2	2.8	
188-D1	5.63															69	63	58	53	48	44	40	36	33	
	16.02															4.0	4.0	4.0	4.0	3.9	3.8	2.2	3.5	3.2	
																5.2	5.2	5.2	5.1	4.9	4.7	3.7	4.1	3.6	
208-D1	4.52																					51	46	42	39
	15.77																					4.3	4.2	4.1	3.9
																						5.4	5.2	5.0	4.6

12LDT28+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	78			
108-S	10.02	143	122	105	90	76	64	53	43	35	27													
	10.02	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6													
		0.7	0.7	0.6	0.6	0.4	0.3	0.1	-0.1	-0.4	-0.7													
108-D1	10.02	197	171	149	130	113	98	84	74	64	55	47	40	33	28									
	17.02	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.5									
		1.4	1.5	1.5	1.5	1.4	1.4	1.3	1.1	1.0	0.8	0.5	0.2	-0.1	-0.5									
128-D1	8.35			176	154	135	118	103	90	78	68	58	50	43	36	30	25							
	16.77			1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2								
				1.8	1.9	1.9	1.9	1.8	1.7	1.6	1.4	1.2	0.9	0.6	0.2	-0.2	-0.7							
148-D1	7.16				178	157	138	122	107	94	82	72	62	54	46	38	32	27						
	16.52				2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.9	2.9	2.8	2.7	2.6							
					2.2	2.2	2.3	2.3	2.2	2.2	2.1	1.9	1.7	1.4	1.1	0.6	0.2	-0.4						
168-D1	7.02										98	87	76	67	58	50	43	36	30					
	16.27										3.3	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.5					
											2.7	2.6	2.4	2.2	2.0	1.7	1.3	0.8	0.3					
188-D1	5.63															59	52	45	38	32	26			
	16.02															4.0	4.0	4.0	4.0	3.9	3.8			
																2.2	1.8	1.4	1.0	0.4	-0.3			

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.