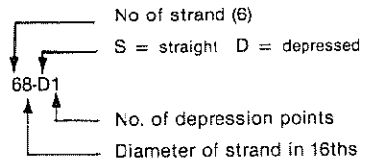
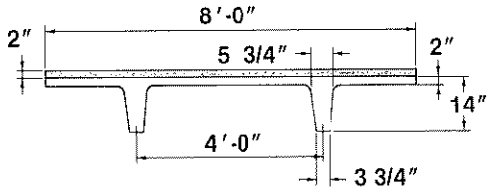
DOUBLE TEE

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.

8′-0″ x 14″
Lightweight Concrete



f'_c = 5000 psi
f_{pu} = 270,000 psi
Low-relaxation strand

Section Properties

		Untopped	Topped
A	=	306 in.²	—
I	=	4508 in.⁴	7173 in.⁴
Y_b	=	10.51 in.	12.40 in.
Y_t	=	3.49 in.	3.60 in.
Z_b	=	429 in.³	578 in.³
Z_t	=	1292 in.³	1992 in.³
wt	=	244 plf	444 plf
		31 psf	56 psf
V/S	=	1.25 in.	

Key
176 — Safe superimposed service load, psf
0.3 — Estimated camber at erection, in.
0.3 — Estimated long-time camber, in.

8LDT14

Table of safe superimposed service load (psf) and cambers

No Topping

Strand Pattern	e_e / e_c	Span, ft. 14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
28-S	8.51	176	142	109	84	66	51	40	32									
	8.51	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6									
		0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.5									
48-S	7.51				170	137	111	91	75	63	52	44	36	30				
	7.51				0.8	1.0	1.1	1.2	1.4	1.5	1.6	1.7	1.7	1.7				
					1.1	1.2	1.4	1.5	1.6	1.7	1.7	1.7	1.6	1.5				
68-S	4.51				183	147	120	99	82	68	57	48	40	34				
	4.51				0.7	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.3				
					1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.3	1.2	1.0				
68-D1	4.51									107	91	78	67	58	50	43	37	32
	8.01									2.1	2.3	2.5	2.7	2.8	2.9	3.0	3.1	3.0
										2.6	2.7	2.8	2.9	2.9	2.8	2.7	2.4	2.1

8LDT14 + 2

Table of safe superimposed service load (psf) and cambers

2″ Normal Weight Topping

Strand Pattern	e_e / e_c	Span, ft. 14	16	18	20	22	24	26	28	30	32	34	36	38	40	42
28-S	8.51	189	149	111	82	60	44	31								
	8.51	0.2	0.3	0.4	0.4	0.5	0.5	0.5								
		0.2	0.3	0.3	0.3	0.2	0.2	0.0								
48-S	7.51				183	144	114	91	72	57	45	35				
	7.51				0.8	1.0	1.1	1.2	1.4	1.5	1.6	1.7				
					0.8	0.9	1.0	1.0	1.0	0.9	0.7	0.5				
68-S	4.51					167	134	107	87	70	56	45				
	4.51					0.9	1.0	1.1	1.2	1.3	1.3	1.4				
						0.8	0.8	0.8	0.8	0.6	0.4	0.1				
68-D1	4.51									110	91	76	63	52	43	33
	8.01									2.1	2.3	2.5	2.7	2.8	2.9	3.0
										1.6	1.6	1.5	1.3	1.0	0.5	0.0

Strength based on strain compatibility; bottom tension limited to $12\sqrt{f'_c}$; see pages 2-3–2-5 for explanation

Values below heavy line require release strengths higher than 3500 psi.