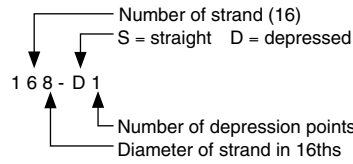


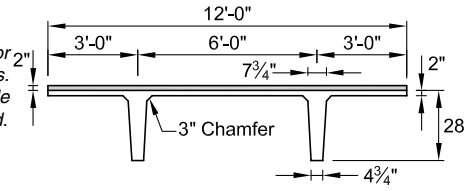
3.4 Double-Tee Load Tables (cont.)

Strand Pattern Designation



Safe loads shown include dead load of 10 lb/ft² for untopped members and 15 lb/ft² for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

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	20.01 in.	23.19 in.
y _t	7.99 in.	6.81 in.
S _b	2227 in. ³	2648 in. ³
S _t	5577 in. ³	9018 in. ³
wt	511 lb/ft	822 lb/ft
DL	43 lb/ft ²	68 lb/ft ²
V/S	1.62 in.	

Key

- 142 – Safe superimposed service load, lb/ft²
- 1.4 – Estimated camber at erection, in.
- 1.8 – Estimated long-time camber, in.

$f'_c = 5000 \text{ psi}$

$f_{pu} = 270,000 \text{ psi}$

1/2-in.-diameter regular strand

Check with regional producers for availability.

12LDT28

Table of safe superimposed service load, lb/ft², and cambers, in.

No Topping

Strand pattern	y _s (end) y _s (center) 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	86	88	90	
108-S	6.00	142	126	112	100	89	80	71	64	57	51	46	41	36	32	28	25											
	6.00	1.4	1.4	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.4	1.3	1.1											
128-S	7.00	167	148	132	118	106	95	86	77	70	63	56	51	46	41	37	33	29	26									
	7.00	1.6	1.7	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.6	1.4									
148-S	8.00	188	167	150	134	121	109	98	89	80	73	66	60	54	49	44	40	36	32	29	26							
	8.00	1.7	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.1	1.9	1.7	1.4								
168-S	9.00	183	164	148	133	120	109	98	89	81	74	67	61	55	50	45	41	37	33	30	27							
	9.00	1.9	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.7	2.8	2.7	2.6	2.5	2.4	2.2	2.0	1.8	1.5								
168-D1	13.00					156	141	129	118	107	98	90	82	74	67	61	56	50	45	41	37	33	30	28	25			
	3.75					3.0	3.1	3.3	3.4	3.5	3.7	3.8	3.8	3.9	3.9	3.9	3.8	3.7	3.6	3.4	3.2	2.9	2.6	2.3	1.9			
188-D1	14.39					4.0	4.2	4.4	4.6	4.7	4.9	5.0	5.0	5.1	5.0	4.9	4.8	4.6	4.4	4.1	3.7	3.3	2.9	2.5	2.0			
	4.00											5.4	5.5	5.6	5.7	5.7	5.6	5.5	5.4	5.1	4.8	4.4	4.0	3.4	2.9	2.3		

12LDT28 + 2

Table of safe superimposed service load, lb/ft², and cambers, in.

2 in. Normalweight Topping

Strand pattern	y _s (end) y _s (center) 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	6.00	137	120	104	91	80	69	60	52	45	38	32	27														
	6.00	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.4	1.3	1.1							
128-S	7.00	164	144	127	111	98	86	76	67	59	51	44	38	31	25												
	7.00	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.4	0.1		
148-S	8.00	187	165	146	129	114	101	90	80	70	61	52	45	38	31	25											
	8.00	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.5	2.4	2.2	2.0	1.8	1.6	1.4	1.1	0.8	0.4	0.1	
168-S	9.00	183	162	144	128	114	101	90	78	67	58	50	42	36	29												
	9.00	2.0	2.1	2.2	2.4	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
168-D1	13.00							135	121	109	98	88	77	68	59	51	43	36	30								
	3.75							3.2	3.3	3.5	3.6	3.7	3.8	3.9	4.0	4.0	4.0	3.9	3.9								
188-D1	14.39							3.0	3.0	3.0	3.0	2.9	2.8	2.6	2.3	2.0	1.6	1.1	0.6								
	4.00																										

Strength is based on strain compatibility; bottom tension is limited to 12√f_c; see pages 3–8 through 3–11 for explanation. Shaded values require release strengths higher than 3500 psi.