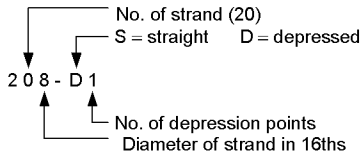


Strand Pattern Designation



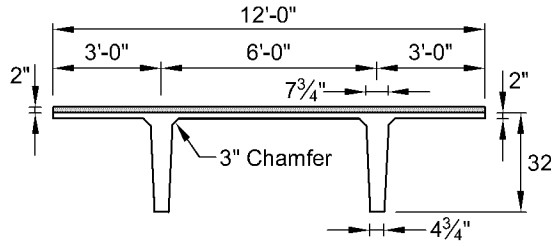
Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

Key
 181 – Safe superimposed service load, psf
 1.5 – Estimated camber at erection, in.
 2.0 – Estimated long-time camber, in.

DOUBLE TEE

12'-0" x 32"

Lightweight Concrete



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

Section Properties

	Untopped	Topped
A	690 in. ²	—
I	64,620 in. ⁴	88,305 in. ⁴
y _b	22.75 in.	26.08 in.
y _t	9.25 in.	7.92 in.
S _b	2,840.4 in. ³	3,385.9 in. ³
S _t	6,985.9 in. ³	11,149.6 in. ³
wt	551 plf	851 plf
DL	46 psf	71 psf
V/S	1.70 in.	

12LDT32

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

No Topping

Strand Pattern	y _{s(end)} in. y _{s(center)} in.	Span, ft																																		
		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	92	94	96	98	100	102				
128-S	7.00	181	162	145	131	118	106	96	87	79	71	64	58	53	48	43	39	35	31	28																
	7.00	1.5	1.6	1.6	1.7	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.7	1.5	1.3																
		2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.5	2.4	2.2	2.0	1.7															
148-S	8.00	185	166	150	135	122	111	101	92	83	76	69	63	57	52	47	43	39	35	32	29	26														
	8.00	1.7	1.9	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.1	1.9	1.7	1.5	1.2														
		2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.0	2.9	2.7	2.6	2.3	1.9	1.5														
168-S	9.00	184	166	151	137	124	113	103	94	86	78	72	66	60	55	50	46	42	38	34	31	28	25													
	9.00	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.5	2.4	2.2	2.0	1.8	1.5	1.2												
		2.7	2.9	3.0	3.1	3.3	3.3	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.5	3.4	3.3	3.1	2.9	2.6	2.3	1.9	1.4												
188-S	10.00	200	181	164	149	135	123	113	103	94	86	79	72	66	60	55	51	46	42	38	35	32	29	26												
	10.00	2.1	2.2	2.3	2.4	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.0	3.0	2.9	2.9	2.8	2.7	2.5	2.4	2.2	1.9	1.6	1.3												
		2.8	3.0	3.1	3.3	3.4	3.5	3.6	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.8	3.7	3.6	3.5	3.3	3.0	2.7	2.4	2.0	1.5											
208-D1	15.50															107	98	91	83	77	70	65	59	54	50	45	44	38	34	31	28	26				
	4.25															4.4	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.7	4.5	4.3	4.1	3.9	3.5	3.2	2.8	2.4				
																5.9	6.0	6.1	6.2	6.2	6.2	6.1	6.0	5.8	5.6	5.3	4.9	4.4	3.9	3.4	2.8	2.2				
228-D1	16.41																				84	78	72	66	61	56	51	47	43	39	36	32	29	26		
	4.50																				5.2	5.2	5.3	5.3	5.2	5.2	5.1	5.0	4.8	4.5	4.2	3.8	3.4	2.9		
																					6.8	6.9	6.8	6.8	6.7	6.5	6.3	6.1	5.7	5.3	4.8	4.2	3.5	2.7		

12LDT32 + 2

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

2 in. Normal Weight Topping

Strand Pattern	y _{s(end)} in. y _{s(center)} in.	Span, ft																																		
		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										
128-S	7.00	177	157	139	123	109	97	86	76	68	60	53	46	40	35	30	25																			
	7.00	1.5	1.6	1.6	1.7	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8																			
		1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.4	1.2	1.0	0.8	0.5	0.2	-0.2																			
148-S	8.00	181	161	144	128	115	102	92	82	73	65	58	51	45	39	33	27																			
	8.00	1.7	1.9	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.2																			
		1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.5	1.3	1.1	0.8	0.4	0.0																			
168-S	9.00	181	162	145	130	117	105	94	84	76	67	59	51	44	38	32	27																			
	9.00	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.5																			
		2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.1	2.0	1.9	1.7	1.5	1.2	0.9	0.5	0.1																			
188-S	10.00	198	177	159	143	129	116	105	94	83	73	64	56	49	42	36	30	25																		
	10.00	2.1	2.2	2.3	2.4	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.0	3.0	2.9	2.9	2.8	2.7																		
		2.2	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.1	1.9	1.7	1.5	1.2	0.8	0.4	-0.1																		
208-D1	15.50																				98	88	78	69	61	54	47	41	35	29						
	4.25																				4.4	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.7	4.5						
																					3.6	3.5	3.3	3.1	2.8	2.5	2.1	1.6	1.1	0.4						
228-D1	16.41																																			
	4.50																																			

Strength is based on strain compatibility; bottom tension is limited to $12\sqrt{f'_c}$; see pages 2-7 through 2-10 for explanation. Shaded values require release strengths higher than 3500 psi.