

# SINGLE TEE

## TYPE "A" LOAD TABLE

**12ST 48**

Table of safe superimposed live load (psf)

Normal Weight Concrete

No Topping

12'-0" x 48" Single Tee

Strand Pattern	Span, ft																							
	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	
128-S	74*	65*	58*	50*	44*	38*	32*	27*																
148-S	82*	73*	65*	57*	50*	44*	38*	32*																
128-D1	101*	91*	81*	73*	65*	58*	51*	45*	40*	34*	29*													
148-D1			103*	93*	84*	76*	69*	62*	55*	49*	44*	38*	34*	29*										
168-D1					102*	92*	84*	76*	69*	62*	56*	50*	45*	40*	35*	31*								
188-D1						109*	99*	91*	83*	75*	69*	62*	56*	51*	46*	41*	36*	32*						
208-D1								105*	96*	88*	81*	74*	67*	61*	56*	50*	46*	41*	37*					
228-D1								118*	109*	100*	92*	85*	78*	72*	66*	60*	55*	50*	45*	41*	36*			
248-D1											96*	88*	82*	75*	69*	63*	58*	53*	48*	43*	38	34		
Dead Load	$f_t$	346	368	392	416	441	466	493	520	547	576	605	635	666	697	729	762	795	829	864	900	936	974	1011
	$f_b$	-1116	-1189	-1265	-1343	-1423	-1505	-1590	-1677	-1767	-1858	-1953	-2049	-2148	-2249	-2352	-2458	-2566	-2676	-2789	-2904	-3022	-3141	-3263
	$a$	0.490	0.556	0.629	0.709	0.796	0.891	0.994	1.106	1.227	1.358	1.499	1.651	1.814	1.988	2.175	2.375	2.589	2.816	3.058	3.315	3.589	3.879	4.186
100 plf Live Load	$f_t$	36	38	41	43	46	48	51	54	57	60	63	66	69	73	76	79	83	86	90	94	98	102	105
	$f_b$	-116	-124	-132	-140	-149	-157	-166	-175	-185	-194	-204	-214	-225	-235	-246	-257	-268	-280	-292	-304	-316	-329	-341
	$a$	0.043	0.049	0.055	0.062	0.070	0.078	0.087	0.097	0.108	0.119	0.131	0.145	0.159	0.174	0.191	0.208	0.227	0.247	0.268	0.291	0.315	0.340	0.367

\*Capacity governed by ultimate strength

Values below heavy line require release strengths higher than 3500 psi

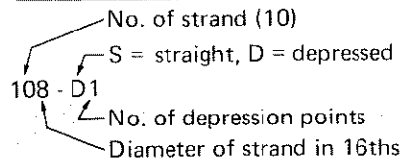
$f'_c = 5000$  psi

$f_{pu} = 270,000$  psi

**Notation**

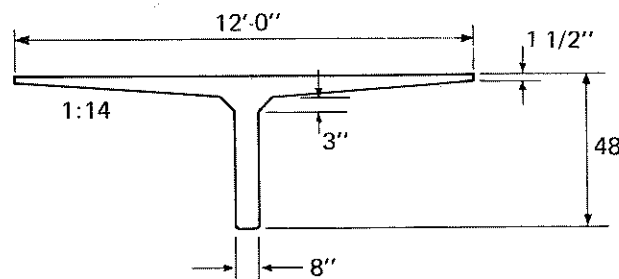
- $f_t$  = top fiber stress, psi (after assumed 22% loss)
- $f_b$  = bottom fiber stress, psi (after assumed 22% loss)
- $a$  = center deflection, in.
- $0.001 l^2 \alpha$  = initial center camber, in. (after assumed 10% loss)
- $l$  = span (ft)
- $M_u$  = ult. moment capacity, in.-kips

**Strand Pattern Designation**



**Section Properties**

- A = 916 in.<sup>2</sup>
- I = 180,639 in.<sup>4</sup>
- $Y_b$  = 36.64 in.
- $Y_t$  = 11.36 in.
- $Z_b$  = 4930 in.<sup>3</sup>
- $Z_t$  = 15,901 in.<sup>3</sup>
- wt = 955 plf
- 80 psf



Strand Pattern	Eccentricity in.		Prestress alone				$\alpha$	$M_u$
			end		center			
	end	ctr	$f_t$	$f_b$	$f_t$	$f_b$		
128-S	26.31	26.31	-152	1740	-152	1740	0.228	16,484
148-S	22.93	22.93	-110	1814	-110	1814	0.232	17,407
128-D1	26.31	33.39	-152	1740	-273	2129	0.269	19,646
148-D1	22.93	33.14	-110	1814	-313	2468	0.301	22,565
168-D1	19.14	32.89	-40	1795	-352	2803	0.328	25,119
188-D1	16.64	32.64	18	1814	-390	3132	0.356	27,685
208-D1	14.44	32.39	82	1814	-426	3458	0.382	30,172
228-D1	12.64	32.14	147	1814	-461	3778	0.408	32,609
248-D1	10.97	31.89	217	1796	-495	4094	0.433	34,965

**Normal Weight Concrete**  
**No Topping**  
**12'-0" x 48" Single Tee**  
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