

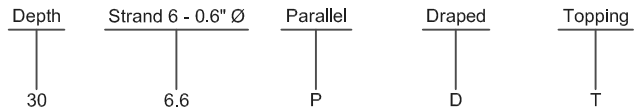
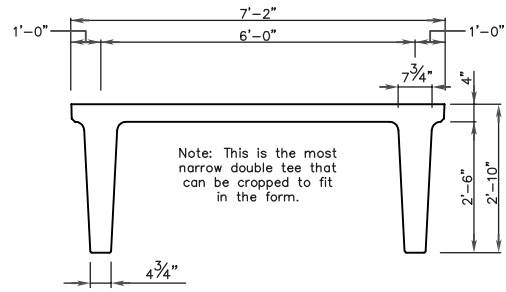
Prestressed Concrete

34" x 7'-2" DOUBLE TEE

(PRETOPPED)

PHYSICAL PROPERTIES

A = 759 in. ²	S _b = 3,119 in. ³
I = 75,460 in. ⁴	S _t = 7,695 in. ³
Y _b = 24.19 in.	Wt. = 792 PLF
Y _t = 9.81 in.	Wt. = 99 PSF



DESIGN DATA

1. Precast Strength @ release = 3,500 PSI.
2. Precast Strength @ release for draped tees = 4,500 PSI.
3. Precast Strength @ 28 days = 6,000 PSI
4. Precast Density = 145 PCF
5. Strand = 0.6" Ø 270K Lo-Relaxation.
6. Maximum moment capacity is critical at midspan for parallel strands and is critical near 0.4 span for draped strands.
7. Maximum bottom tensile stress is $12\sqrt{f_c} = 930$ PSI
8. Flexural capacity is based on stress/strain strand relationships.
9. All superimposed load is treated as live load in the flexural strength analysis. To determine the allowable live load if the amount of superimposed dead load is known use the following conversion method...

$$\text{Allowable Live Load} = \frac{(1.6)(\text{Load Table Value}) - (1.2)(\text{Superimposed Dead Load})}{1.6}$$

10. If the above conversion is used then allowable stress limits must be checked so they are not exceeded.
11. Deflection limits were not considered when determining allowable loads in this table.

ALLOWABLE SUPERIMPOSED LIVE LOADS (psf)

Section	Ø Mn (in. Kips)	SPAN (FEET)																								
		44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	
34 - 6.6 P	9,348	202	178	157	139	122	107	94	83	72	62	54	46	39	32											
34 - 8.6 P	11,978			223	200	179	160	143	128	115	102	91	81	72	63	55	48	42	36	30						
34 - 10.6 P	14,365					230	208	187	169	153	138	125	113	102	92	82	74	66	58	52	45	39	34			
34 - 12.6 P	16,508						250	227	206	188	171	155	141	129	117	106	96	87	79	71	64	57	50	44	38	
34 - 14.6 P	18,407							262	239	218	200	182	157	153	140	128	116	105	95	86	77	69	61	54	48	