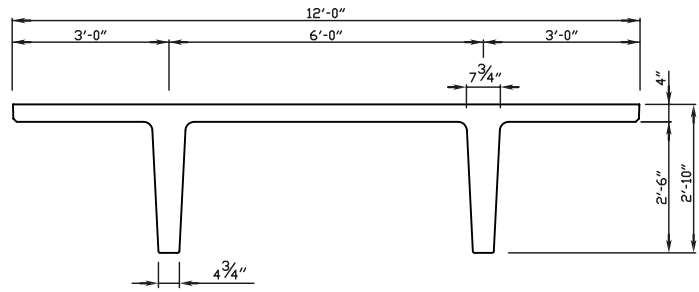


# Prestressed Concrete 34" x 12' DOUBLE TEE (PRETOPPED)

PHYSICAL PROPERTIES	
A = 951 in. <sup>2</sup>	S <sub>b</sub> = 3,301 in. <sup>3</sup>
I = 85,054 in. <sup>4</sup>	S <sub>t</sub> = 10,334 in. <sup>3</sup>
Y <sub>b</sub> = 25.77 in.	Wt. = 991 PLF
Y <sub>t</sub> = 8.23 in.	Wt. = 83 PSF



Depth	Strand 6 - 0.6" Ø	Parallel	Draped	Topping
30	6.6	P	D	T

## 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 = 150 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)												IBC 2012 & ACI 318-11 (1.2 D + 1.6 L)													
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	9,416	106	92	79	68	58	50	42	35																
34 - 8.6 P	12,099				106	93	82	72	62	54	47	40	34												
34 - 10.6 P	14,554							99	88	78	69	61	54	47	41	35									
34 - 12.6 P	16,782									99	89	80	71	64	56	50	44	38							
34 - 14.6 D	21,882												111	101	92	83	76	68	61	55	49	43	38		
34 - 16.6 D	24,688														107	98	89	81	74	66	59	53	48	42	37
34 - 18.6 D	27,414															110	101	92	84	76	69	63	57	51	46



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This table is for simple spans and uniform loads. Design data for any of these span-load conditions is available on request. Individual designs may be furnished to satisfy unusual conditions of heavy loads, concentrated loads, cantilevers, etc...