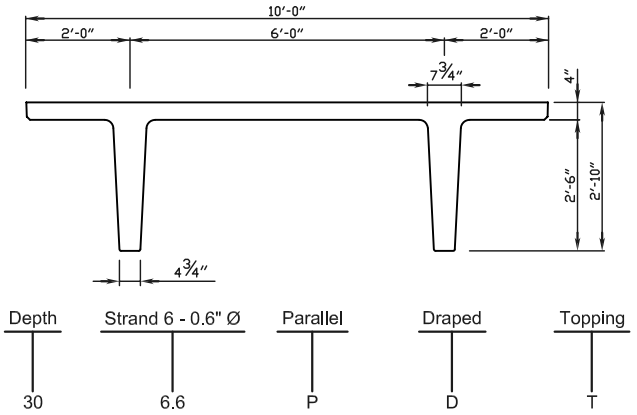
Prestressed Concrete
34" x 10' DOUBLE TEE
(PRETOPPED)

PHYSICAL PROPERTIES	
$A = 855$ in.^{2}	$S_b = 3{,}222$ in.^{3}
$I = 80{,}781$ in.^{4}	$S_t = 9{,}046$ in.^{3}
$Y_b = 25.07$ in.	Wt.= 891 PLF
$Y_t = 8.93$ in.	Wt.= 89 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 = 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	9,401	135	118	103	89	78	67	58	49	41	35														
34 - 8.6 P	12,072					119	105	93	82	72	64	55	48	41	35										
34 - 10.6 P	14,512								112	101	90	80	71	63	56	49	43	37							
34 - 12.6 P	16,721										114	103	93	83	67	75	60	53	47	42	36				
34 - 14.6 D	21,800														116	105	96	87	79	71	64	58	51	46	40
34 - 16.6 D	24,580																111	102	93	85	77	70	63	57	51
34 - 18.6 D	27,277																	115	106	97	89	81	74	67	61

NITTERHOUSE CONCRETE PRODUCTS

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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...

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