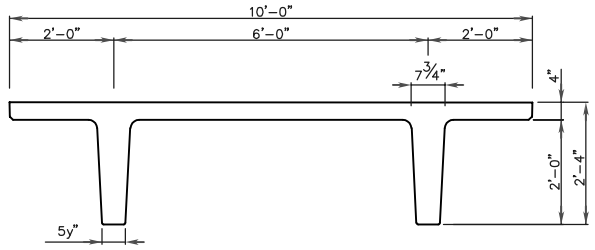
Prestressed Concrete
28" x 10' DOUBLE TEE
(PRETOPPED)

PHYSICAL PROPERTIES	
$A = 794$ in.^{2}	$S_b = 2{,}362$ in.^{3}
$I = 49{,}000$ in.^{4}	$S_t = 6{,}758$ in.^{3}
$Y_b = 20.75$ in.	Wt.= 828 PLF
$Y_t = 7.25$ 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 = 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)																							
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86
28 - 6.6 P	7,502	133	115	99	85	73	62	53	45	37															
28 - 8.6 P	9,541				125	110	96	84	74	64	56	48	41	34											
28 - 10.6 P	11,348						127	110	100	88	78	69	60	53	46	40	34								
28 - 12.6 P	12,925								122	109	97	87	77	69	61	54	47	40	34						
28 - 14.6 D	17,370												119	108	97	87	79	71	63	56	50	44	38		
28 - 16.6 D	20,488													123	112	101	91	83	74	67	60	54	48	42	37
28 - 18.6 D	22,574														124	113	103	94	85	77	70	63	56	51	45

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