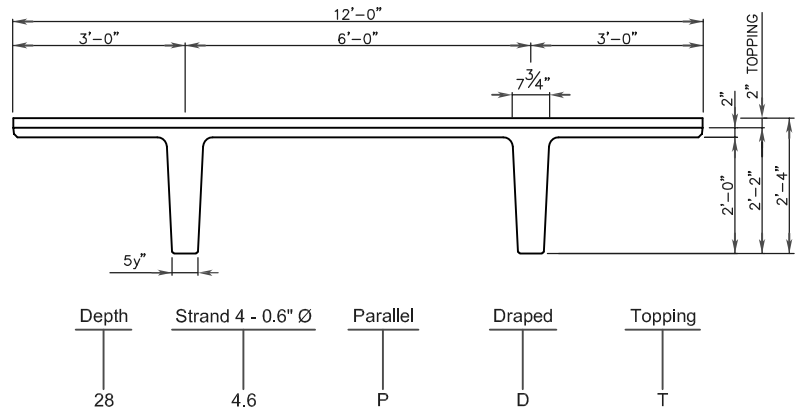


Prestressed Concrete 26" x 12' DOUBLE TEE (2" TOPPING)

PHYSICAL PROPERTIES

$A = 602 \text{ in.}^2$	$S_b = 2,024 \text{ in.}^3$
$I = 37,368 \text{ in.}^4$	$S_t = 5,085 \text{ in.}^3$
$I' = 48,451 \text{ in.}^4$	$S_{tt}' = 9,413 \text{ in.}^3$
$Y_b = 18.60 \text{ in.}$	$Wt. = 627 \text{ PLF}$
$Y_t = 7.40 \text{ in.}$	$Wt. = 52 \text{ PSF}$
$Y_{bb}' = 20.72 \text{ in.}$	$Wt.' = 927 \text{ PLF}$
$Y_{tt}' = 7.28 \text{ in.}$	$Wt.' = 77 \text{ PSF}$



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. Topping Strength @ 28 days = 3,000 PSI.
5. Precast / Topping Density = 150 PCF.
6. Strand = 0.6" Ø 270K Lo-Relaxation.
7. Maximum moment capacity is critical at midspan for parallel strands and is critical near 0.4 span for draped strands.
8. Maximum bottom tensile stress is $12\sqrt{f_c} = 930 \text{ PSI}$.
9. Flexural capacity is based on stress/strain strand relationships.
10. 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...

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

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

ALLOWABLE SUPERIMPOSED LIVE LOADS (psf)

Section	Ø Mn (in. Kips)	SPAN (FEET)																							
		34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80
26 - 4.6PT	5,206	98	81	67	55	44	35																		
26 - 6.6PT	7,442			121	103	88	75	64	54	45	37														
26 - 8.6PT	9,443						111	97	84	73	63	54	46	39											
26 - 10.6PT	11,180								110	97	85	75	65	56	47	39	31								
26 - 12.6PT	12,678									118	104	95	85	75	66	57	50	43	37						
26 - 14.6DT	17,041											121	107	95	85	75	66	57	50	43	37				
26 - 16.6DT	19,097												122	109	98	87	77	69	61	53	46	40	34		
26 - 18.6DT	21,043														122	110	98	88	79	70	62	55	48	42	36