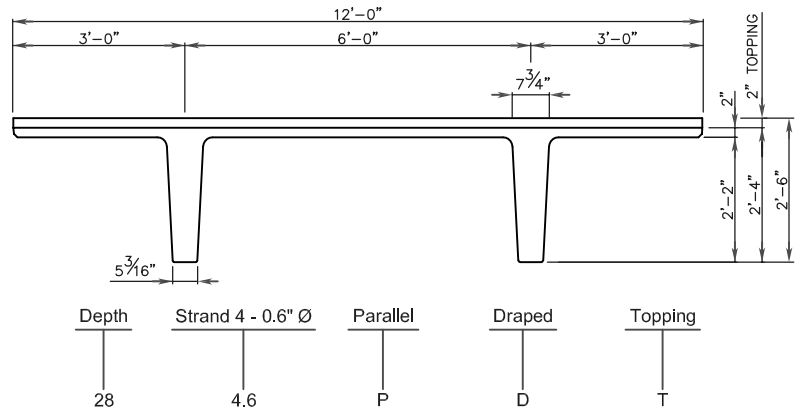


Prestressed Concrete 28" x 12' DOUBLE TEE (2" TOPPING)

PHYSICAL PROPERTIES

A = 624 in. ²	S _b = 2,289 in. ³
I = 45,595 in. ⁴	S _t = 5,643 in. ³
I' = 58,325 in. ⁴	S _{tt} ' = 10,512 in. ³
Y _b = 19.92 in.	Wt. = 650 PLF
Y _t = 8.08 in.	Wt. = 54 PSF
Y _{bb} ' = 22.15 in.	Wt.' = 950 PLF
Y _{tt} ' = 7.85 in.	Wt.' = 79 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 $12\sqrt{f_c} = 930$ 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)																							
		38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84
28 - 4.6PT	5,628	75	62	51	41	32																			
28 - 6.6PT	8,074			99	85	73	62	52	44	36	30														
28 - 8.6PT	10,277						95	83	72	62	54	46	39	33											
28 - 10.6PT	12,234									97	86	76	66	58	50	42	34								
28 - 12.6PT	13,947										106	95	82	72	62	53	45	37							
28 - 14.6DT	18,517													99	88	78	69	61	53	46	40	34			
28 - 16.6DT	20,785														102	91	82	73	64	57	50	44	38		
28 - 18.6DT	22,960															103	93	83	75	67	59	52	46	40	35