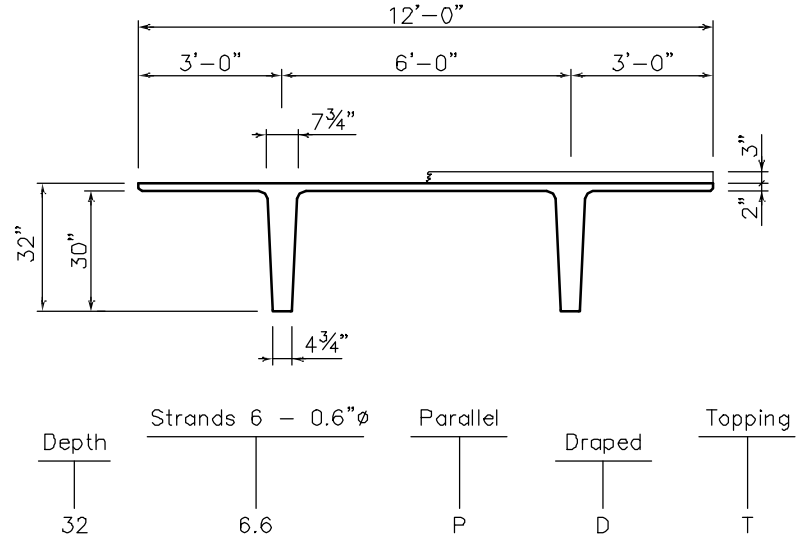


# Prestressed Concrete 32"x12' Double Tee (3" C.I.P. TOPPING)

PHYSICAL PROPERTIES	
Precast	
$A' = 1095 \text{ in.}^2$	$S'_b = 3388 \text{ in.}^3$
$I' = 88,299 \text{ in.}^4$	$S'_t = 14,865 \text{ in.}^3$ (at top of D.T.)
$Y_b = 26.06 \text{ in.}$	$S'_{tt} = 11,121 \text{ in.}^3$ (at top of topping)
$Y'_t = 5.94 \text{ in.}$ (to top of D.T.)	Wt. = 1141 PLF
$Y'_{tt} = 7.94 \text{ in.}$ (to top of topping)	Wt. = 95 PSF



### DESIGN DATA

1. Precast strength @ RELEASE = 3000 PSI. (min.)
2. Precast strength @ 28 days = 6000 PSI.
3. Precast Density = 150 PCF
4. Strand = 0.6"  $\phi$  270k LO-relaxation.
5. Topping Strength = 3,000 PSI
6. Topping Density = 150 PCF
7. Maximum bottom tensile stress is  $12\sqrt{f'_c} = 930 \text{ PSI}$ .
8. All superimposed load is treated as live load in the flexural strength analysis.
9. Flexural capacity is based on stress/strain strand relationships.
10. Maximum moment capacity is critical at midspan for parallel strands and is critical near 0.4 span for draped strands.
11. All loads shown refer to allowable loads after the topping has hardened.

Table of Safe Superimposed Loads (lbs. per sq. ft.)																							
Section	$\phi M_n$ (in. Kips)	Span in Feet																					
		46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	
32-6.6 PT	9,664	71	58	48	38	30																	
32-8.6 PT	12,371	112	97	83	71	60	50	42	34														
32-10.6 PT	14,836	151	132	115	101	88	76	66	56	48	40	33											
32-12.6 PT	17,000	185	163	144	128	113	99	87	76	67	58	49	42	33									
32-14.6 DT	21,722	257	230	206	184	165	148	133	119	106	95	83	73	65	57	50	42	34					
32-16.6 DT	23,007							159	143	129	116	102	90	78	68	59	52	45	39	33			
32-18.6 DT	24,817													108	96	84	74	64	55	47	41	36	31

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, flange or stem openings and narrow widths.



2655 MOLLY PITCHER HWY. SOUTH, BOX N  
CHAMBERSBURG, PA 17201-0813  
717-267-4505 • FAX: 717-267-4518