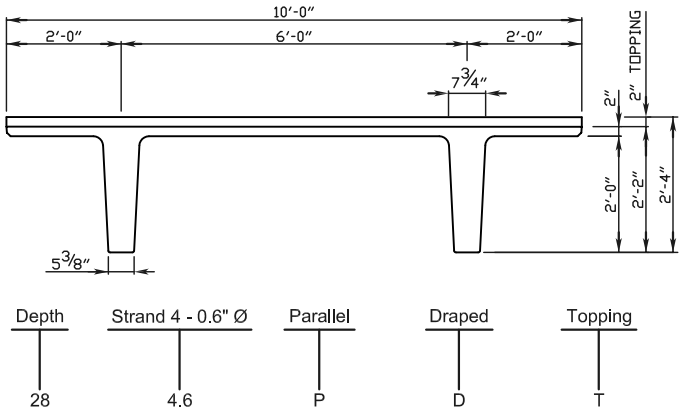
Prestressed Concrete
26" x 10' DOUBLE TEE
(2" TOPPING)

PHYSICAL PROPERTIES	
$A = 554$ in.^{2}	$S_b = 1{,}967$ in.^{3}
$I = 35{,}484$ in.^{4}	$S_t = 4{,}460$ in.^{3}
$I' = 45{,}964$ in.^{4}	$S'_{tt} = 8{,}273$ in.^{3}
$Y_b = 18.04$ in.	Wt.= 578 PLF
$Y_t = 7.96$ in.	Wt.= 58 PSF
$Y'_{bb} = 20.14$ in.	Wt.'= 828 PLF
$Y'_{tt} = 7.86$ in.	Wt.'= 83 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) — IBC 2012 & ACI 318-11 (1.2 D + 1.6 L)

Section	Ø Mn (in. Kips)	Span (Feet)																							
		36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82
26 - 4.6PT	5,192	104	87	73	60	49	40	31																	
26 - 6.6PT	7,412			130	112	97	83	71	61	52	43	36													
26 - 8.6PT	9,379						122	107	94	82	71	62	54	46	39										
26 - 10.6PT	11,096								122	108	96	85	74	63	54	45	37								
26 - 12.6PT	12,547									130	114	100	87	76	65	56	47	39							
26 - 14.6DT	16,888													120	107	96	85	76	67	59	51	45	38		
26 - 16.6DT	18,879														123	110	99	89	79	70	62	55	48	41	36
26 - 18.6DT	20,729															123	111	100	90	81	72	64	57	50	44

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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