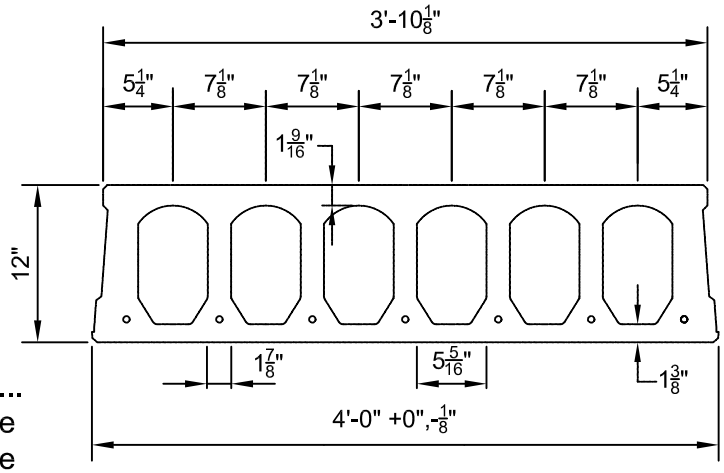
Prestressed Concrete
12"x4'-0" NiCore Plank

1 Hour Fire Resistance Rating (Untopped)

PHYSICAL PROPERTIES Precast	
$A = 296$ in.^{2}	$b_w = 14.25$ in.
$I = 5191$ in.^{4}	$S_b = 867$ in.^{3}
$Y_b = 5.99$ in.	$S_t = 863$ in.^{3}
$Y_t = 6.01$ in.	Wt.= 308 PLF
$e = 4.24$ in.	Wt.= 77.00 PSF



DESIGN DATA

1. Precast Strength @ 28 days = 6000 PSI
2. Precast Strength @ release = 3800 PSI
3. Precast Density = 150 PCF
4. Strand = 1/2"Ø Lo-Relaxation.
5. Strand Height = 1.75 in.
6. Ultimate moment capacity (when fully developed)...
   6-1/2"Ø, 270K = 180.4 k-ft at 60% jacking force
   7-1/2"Ø, 270K = 207.5 k-ft at 60% jacking force
7. Maximum bottom tensile stress is $10\sqrt{f'c}$ = 775 PSI
8. All superimposed load is treated as live load in the strength analysis of flexure and shear.
9. Flexural strength capacity is based on stress/strain strand relationships.
10. Deflection limits were not considered when determining allowable loads in this table.
11. Load values to the left of the solid line are controlled by ultimate shear strength.
12. Load values to the right are controlled by ultimate flexural strength or allowable service stresses.
13. Camber is inherent in all prestressed hollow core slabs and is a function of the amount of eccentric prestressing force needed to carry the superimposed design loads along with a number of other variables. Because prediction of camber is based on empirical formulas it is at best an estimate, with the actual camber usually higher than calculated values.

SAFE SUPERIMPOSED SERVICE LOADS																					IBC 2012 & ACI 318-11 (1.2 D + 1.6 L)
Strand Pattern		SPAN (FEET)																			
		29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
6 - 1/2"ø	LOAD (PSF)	208	191	175	161	148	137	126	116	106	98	90	83	76	70	64	58	53	48	44	
7 - 1/2"ø	LOAD (PSF)	247	229	211	194	179	166	154	142	131	121	112	104	96	89	82	76	70	64	59	

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, flange or stem openings and narrow widths. The allowable loads shown in this table reflect a 1 Hour & 0 Minute fire resistance rating.