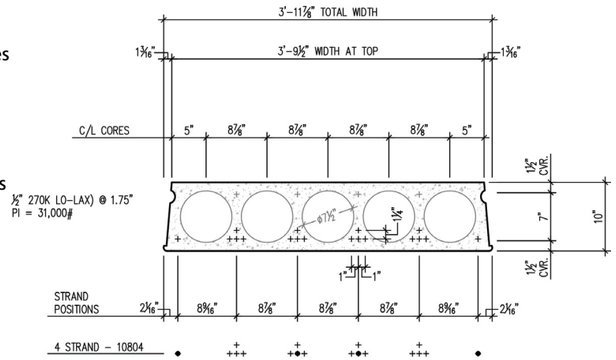
10” Wells Hollowcore Load Tables

Allowable load in PSF. These tables are for general descriptive purposes only. Actual design load tables are dependent on local codes and standards, material properties and product end usage.

- Blue shaded values are controlled by shear. Filling of cores may be requested.
- Bold or gray shaded values: live load deflection exceeds L/360 or total deflection exceeds L/240.



Series Designation Example

10808T

- INDICATES COMPOSITE TOPPING
- NUMBER OF STRANDS
- STRAND DIAMETER (16THS)
- PLANK THICKNESS

1.5 Hour Fire Rating, No Topping

If hollowcore can be considered restranded, use this load chart for fire ratings up to 3 hours

Series	Area of Steel (In2)	Mn (kip-ft.)	Span in Feet																																			
			20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804	0.612	97.21	103	89	77	66	56	48	41	34																							
10806	0.918	142.0	316	297	279	255	234	216	199	184	171	159	148	136	124	114	105	96	88	81	74	68	62	57	52	47	43	39					
10808	1.224	184.0	316	297	281	266	252	240	228	217	202	188	175	163	152	143	134	125	118	110	104	98	92	87	81	75	70	65	60	55	51	47	43
10810	1.53	221.6	316	297	281	266	252	240	228	217	208	198	190	182	174	164	154	145	136	128	120	113	107	101	95	90	85	81	76	72	68	65	61

2 Hour Fire Rating, No Topping

Series	Area of Steel (In2)	Mn (kip-ft.)	Span in Feet																																			
			20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804	0.612	39.94	103	89	77	66	56	48	41	34																							
10806	0.918	59.17	260	230	203	180	160	142	126	112	99	88	78	68	60	52	45	39	33														
10808	1.224	77.87	316	297	281	266	232	208	187	169	152	137	124	112	100	90	81	73	65	58	51	45	40	34	30								
10810	1.53	96.02	316	297	281	266	252	239	216	195	176	160	145	131	119	108	98	88	80	72	64	58	52	46	40	35	31						

3 Hour Fire Rating, No Topping

Series	Area of Steel (In2)	Mn (kip-ft.)	Span in Feet																																			
			20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804	0.612	23.14	60	48	38																												
10806	0.918	34.42	123	105	90	76	64	54	45	36																							
10808	1.224	45.51	184	161	140	123	107	93	81	70	61	52	44	37	30																		
10810	1.53	56.38	245	216	190	168	149	132	117	103	91	80	71	62	54	47	40	34															

1.5 Hour Fire Rating, 2” Minimum Composite Topping

If hollowcore can be considered restranded, use this load chart for fire ratings up to 3 hours

Series	Area of Steel (In2)	Mn (kip-ft.)	Span in Feet																																			
			20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804	0.612	117.2	116	99	84	71	60	50	41	33																							
10806	0.918	169.1	389	366	336	306	279	256	235	216	199	184	167	152	139	126	115	105	95	87	79	71	64	58	52	47	41	37	32				
10808	1.224	217.2	389	366	345	326	309	293	279	259	239	221	205	190	177	164	153	142	133	124	116	109	101	94	86	79	72	66	61	55	50	45	41
10810	1.53	262.3	389	366	345	326	309	293	279	259	253	241	231	221	206	192	179	167	156	146	136	128	119	112	105	99	92	87	82	76	72	67	63

2 Hour Fire Rating, 2” Minimum Composite Topping

Series	Area of Steel (In2)	Mn (kip-ft.)	Span in Feet																																			
			20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804T	0.612	49.05	116	99	84	71	60	50	41	33																							
10806T	0.918	72.19	308	270	238	210	185	163	144	127	111	97	85	73	63	54	45	37	30														
10808T	1.224	94.35	389	366	340	303	270	242	217	194	174	156	139	125	111	99	88	78	68	60	52	44	38	31									
10810T	1.53	115.4	389	366	345	326	309	293	279	258	234	211	191	173	157	142	128	116	104	94	84	75	67	59	52	45	39	33					

3 Hour Fire Rating, 2” Minimum Composite Topping

Series	Area of Steel (In2)	Mn (kip-ft.)	Span in Feet																																			
			20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804T	0.612	28.54	65	50	38																												
10806T	0.918	42.28	141	120	101	84	70	57	45	35																							
10808T	1.224	55.64	216	187	162	140	121	104	89	76	64	54	44	35																			
10810T	1.53	68.59	288	252	221	195	171	150	132	116	101	88	76	65	55	46	38	31															

Estimated Camber *at erection, cambers in inches*

Series	Span in Feet																																					
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10804	0.27	0.29	0.29	0.3	0.3	0.3	0.29	0.28																							
10806	0.48	0.51	0.54	0.57	0.6	0.62	0.64	0.66	0.67	0.67	0.67	0.66	0.65	0.62	0.59	0.55	0.49	0.43	0.35	0.26	0.16	0.04	-0.09	-0.24	-0.41	-0.59					
10808	0.68	0.73	0.79	0.84	0.89	0.94	0.98	1.02	1.06	1.1	1.13	1.15	1.17	1.18	1.18	1.17	1.16	1.13	1.1	1.05	0.99	0.91	0.82	0.72	0.6	0.46	0.31	0.14	-0.06	-0.27	-0.51
10810	0.87	0.95	1.02	1.1	1.17	1.24	1.31	1.38	1.45	1.51	1.57	1.62	1.67	1.72	1.75	1.78	1.8	1.82	1.82	1.81	1.79	1.76	1.71	1.66	1.58	1.49	1.39	1.26	1.12	0.96	0.78

Selection Properties

Net Area	247.99 IN2
Moment of Inertia	3262.4IN4
Centoid From Slab Bottom	5.00 IN
Section Modules. Top	652.46 IN3
Section Modules. Bottom	652.46 IN3
Web Width	9.25 IN
V/S Ratio	2.28 IN
Self Weight	69.0 PSF
Strength at Transfer	3,500 PSI

Strength of Concrete	7,000 psi
Unit Weight of Concrete	150 PCF
Ultimate Steel Strength	270 KSI
Strand Jacking Stress	202.5 KSI
Strand Type	Low Relaxation
Thermal Resistance	R = 1.74
Sound Transmission Class	STC = 52
Impact Insulation Class	IIC = 33