

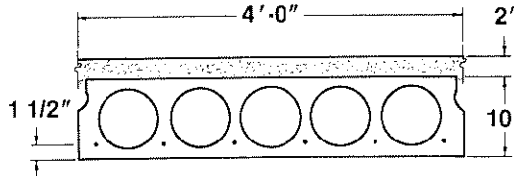
# HOLLOW-CORE

4'-0" x 10"  
Lightweight Concrete

## Strand Patterns

Producer may vary size and strength of strands. See "explanation of load tables"

Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.



## Section Properties

	Untopped	Topped
A =	259 in. <sup>2</sup>	—
I =	3223 in. <sup>4</sup>	5328 in. <sup>4</sup>
Y <sub>b</sub> =	5.00 in.	6.34 in.
Y <sub>t</sub> =	5.00 in.	5.66 in.
Z <sub>b</sub> =	645 in. <sup>3</sup>	840 in. <sup>3</sup>
Z <sub>t</sub> =	645 in. <sup>3</sup>	941 in. <sup>3</sup>
b <sub>w</sub> =	10.50 in.	10.50 in.
wt =	207 plf	307 plf
	52 psf	77 psf
V/S =	2.23 in.	

Capacity of sections of other configurations are similar. For precise values, see local hollow-core manufacturer.

$$f'_c = 5000 \text{ psi}$$

$$f'_{ci} = 3500 \text{ psi}$$

## Key

- 240 — Safe superimposed service load, psf
- 0.4 — Estimated camber at erection, in.
- 0.5 — Estimated long-time camber, in.

**4LHC10**

Table of safe superimposed service load (psf) and cambers

No Topping

Strand Designation Code	Span, ft.																							
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
40-S	240	214	191	171	154	139	125	113	102	93	84	76	69	62	56	51	46							
	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.0							
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.1	-0.1	-0.2	-0.4	-0.6							
50-S	284	267	244	220	199	180	163	149	135	123	113	103	94	86	78	71	64	58	52	47	42			
	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.1				
	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.3	0.2	0.0	-0.1	-0.4	-0.6	-0.9			
60-S	293	273	259	246	232	215	200	183	167	152	139	127	116	106	97	88	81	73	67	61	55	50	45	
	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.8	0.7	0.6	0.4		
	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	0.9	0.8	0.7	0.5	0.4	0.2	-0.1	-0.3	-0.6	
70-S	299	282	265	252	241	227	218	204	187	177	162	148	136	125	115	105	97	89	81	75	68	63	57	
	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.2	1.1		
	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.4	1.3	1.2	1.1	0.9	0.7	0.5	0.2	
80-S	288	274	258	247	233	224	213	202	193	181	166	155	144	133	122	113	104	96	88	82	75	69		
	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.7	
	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.8	1.7	1.5	1.3	1.1	

**4LHC10+2**

Table of safe superimposed service load (psf) and cambers

2" Normal Weight Topping

Strand Designation Code	Span, ft.																						
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
40-S	279	247	220	196	175	157	140	126	113	101	88	76	65	55	46								
	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2								
	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.5	-0.7	-0.9									
50-S		283	254	228	205	185	167	150	133	118	104	92	80	70	60	51							
		0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5								
		0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	-0.1	-0.2	-0.4	-0.6	-0.9							
60-S		290	276	252	228	206	185	166	148	132	118	105	93	82	72	63	55						
		0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.9					
		0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.4	0.3	0.1	-0.1	-0.3	-0.5	-0.8						
70-S		296	282	269	254	243	220	198	179	161	145	130	117	105	93	83	74	65	57				
		1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3				
		1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.7	0.6	0.5	0.3	0.1	-0.2	-0.4	-0.7					
80-S		288	275	260	249	236	228	209	189	171	155	140	127	115	103	93	83	74					
		1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9				
		1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.0	0.9	0.7	0.5	0.2	0.0				

**Bold type** — Capacity governed by stresses, others governed by flexural or shear strength