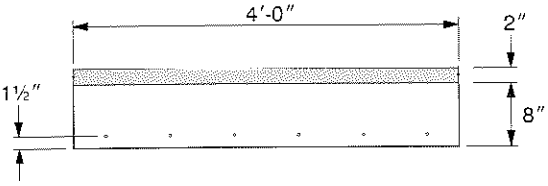
Strand Pattern Designation

76-S

- S = straight
- Diameter of strand in 16ths
- No. of strand (7)

SOLID FLAT SLAB

8″ Thick
Lightweight Concrete



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.

f'_c = 5,000 psi
f'_c = 3,500 psi

Section Properties

		Untopped		Topped	
A	=	384	in²	—	
I	=	2,048	in⁴	4,234	in⁴
y_b	=	4.00	in.	5.12	in.
y_t	=	4.00	in.	4.88	in.
S_b	=	512	in³	827	in³
S_t	=	512	in³	868	in³
b_w	=	48.00	in.	48.00	in.
wt	=	307	plf	407	plf
		77	psf	102	psf
V/S	=	3.43	in.		

Key
318 — Safe superimposed service load, psf
0.2 — Estimated camber at erection, in.
0.3 — Estimated long-time camber, in.

LFS8

Table of safe superimposed service load (psf) and cambers — No Topping

Strand Designation Code	Span, ft																					
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
66-S	318	269	229	196	168	144	124	107	92	79	68	58	49	41	33							
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	−0.1	−0.2	−0.4							
	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	−0.1	−0.3	−0.4	−0.6	−0.9							
76-S	376	320	274	235	203	176	153	133	116	101	88	76	66	56	48	41	34					
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	−0.1	−0.2	−0.3	−0.5					
	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.0	−0.2	−0.4	−0.6	−0.8	−1.1					
58-S		398	357	312	272	238	208	183	162	143	126	111	98	87	76	67	57	49	41	34		
		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	0.2	0.1	0.0	−0.2	−0.3	−0.5		
		0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.0	−0.2	−0.4	−0.7	−1.0	−1.4		
68-S					330	290	256	226	201	178	159	142	126	112	99	87	76	66	57	49	42	35
					0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.1	0.0	−0.2	−0.5
					0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.5	0.3	0.1	−0.1	−0.4	−0.7	−1.1	−1.5
78-S					386	340	301	267	237	211	188	168	151	135	120	107	95	84	74	65	57	49
					0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.3	0.1
					1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.7	0.5	0.3	0.0	−0.3	−0.7

LFS8+2

Table of safe superimposed service load (psf) and cambers — 2″ Normal Weight Topping

Strand Designation Code	Span, ft																		
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
66-S	250	214	184	158	136	116	100	85	72	57	41								
	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	−0.1	−0.2								
	0.2	0.2	0.1	0.1	0.0	−0.1	−0.2	−0.3	−0.5	−0.7	−0.9								
76-S	299	258	224	194	168	146	127	110	95	74	61	45	31						
	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	−0.1	−0.2	−0.3						
	0.3	0.3	0.2	0.2	0.1	0.1	0.0	−0.2	−0.3	−0.5	−0.7	−0.9	−1.2						
58-S	394	343	300	262	230	203	179	157	139	122	103	84	67	52	38				
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	0.0	−0.2				
	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.1	0.0	−0.2	−0.4	−0.6	−0.9	−1.2				
68-S			364	320	283	251	222	198	176	156	139	119	100	82	67	52	40		
			0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.1	0.0		
			0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.0	−0.2	−0.4	−0.7	−1.0	−1.4		
78-S				374	332	295	263	235	210	188	169	151	132	113	95	79	65	51	39
				0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.3	0.1
				0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.3	0.1	−0.2	−0.4	−0.6	−1.1	−1.6

Strength based on strain compatibility; bottom tension limited to $6\sqrt{f'_c}$; see pages 2-2–2-6 for explanation.