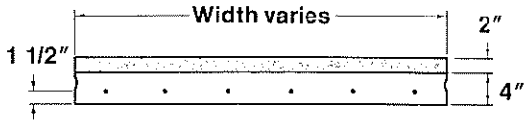
SOLID FLAT SLAB

Strand Pattern Designation

76-S
- S = straight
- Diameter of strand in 16ths
- Number of strand (7)

4″ Thick
Normal Weight 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.



Section Properties per foot of width

		Untopped	Topped
A	=	48.00 in.²	—
I	=	64.00 in.⁴	190.75 in.⁴
Y_b	=	2.00 in.	2.84 in.
Y_t	=	2.00 in.	3.16 in.
Z_b	=	32.00 in.³	67.18 in.³
Z_t	=	32.00 in.³	60.38 in.³
b_w	=	12.00 in.	12.00 in.
wt	=	50 psf	75 psf
V/S	=	2.00 in.	

f'_c = 5000 psi
f'_{ci} = 3500 psi
Low-relaxation strand

Key
167 — Safe superimposed service load, psf
0.1 — Estimated camber at erection, in.
0.1 — Estimated long-time camber, in.

FS4

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

Strand Designation Code	Span, ft. 10	11	12	13	14	15	16	17
66-S	167	138	116	98	83	66		
	0.1	0.1	0.1	0.1	0.0	0.0		
	0.1	0.1	0.1	0.0	0.0 – 0.1			
76-S	197	164	139	118	98	79		
	0.1	0.1	0.1	0.1	0.1	0.0		
	0.1	0.1	0.1	0.1	0.0 – 0.1			
58-S	253	212	180	154	127	104	86	70
	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0
	0.2	0.2	0.2	0.2	0.2	0.1	0.0 – 0.1	
68-S	291	234	190	156	129	108	90	75
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
	0.3	0.3	0.3	0.3	0.2	0.2	0.1 – 0.1	

FS4 + 2

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

Strand Designation Code	Span, ft. 10	11	12	13	14	15	16	17
66-S	315	264	224	167	123	87		
	0.1	0.1	0.1	0.0	0.0 – 0.1			
	0.0	0.0	0.0 – 0.1	– 0.2	– 0.3			
76-S		311	265	203	153	113	80	
		0.1	0.1	0.1	0.0	0.0 – 0.1		
		0.0	0.0 – 0.1	– 0.1	– 0.3	– 0.4		
58-S				274	214	166	127	95
				0.2	0.1	0.1	0.0	0.0
				0.0	0.0 – 0.1	– 0.3	– 0.4	
68-S					268	213	169	132
					0.2	0.2	0.2	0.1
					0.1	0.0 – 0.1	– 0.3	

Strength based on strain compatibility; bottom tension limited to $6\sqrt{f'_c}$; see pages 2-3–2-5 for explanation