3.5DF-24 FL FORMLOK® DOVETAIL DECK
LIGHT WEIGHT CONCRETE (115 pcf)

Imperial LSD

Maximum Unshored Spans

Slab Depth		Deck	Maximum Unshored Construction Clear Span		
Total	Topping	Gage	1	2	3
5½”	2”	18	15'-2"	16'-6"	17'-0"
		16	16'-0"	19'-3"	18'-6"
5¾”	2¼”	18	14'-11"	16'-2"	16'-9"
		16	15'-10"	18'-11"	18'-3"
8”	4½”	18	13'-8"	14'-2"	14'-8"
		16	14'-6"	16'-7"	16'-9"

Composite Deck-Slab Properties

Concrete + Deck	Deflection	Moment	Shear
	$I_d = (I_{cr}+I_u)/2$	ϕM_{no}	ϕV_{no}
(psf)	(in^4/ft)	(kip-ft/ft)	(kip/ft)
48.3	13.97	13.93	6.94
49.4	15.49	16.47	6.94
50.7	15.68	14.96	7.26
51.8	17.24	17.50	7.26
72.3	38.73	20.74	10.09
73.4	42.16	25.18	10.09

Notes:
1. Maximum unshored spans are based on 20.9 psf uniform construction live load and 151 plf concentrated construction live load.
2. Maximum unshored spans do not consider web-crippling. Required bearing should be determined based on specific span conditions.

Superimposed Factored Load, ϕW_n, / Deflection at L/360 (psf)

LWC (115 pcf), f'_c = 4000 psi

Total Slab Depth	Deck Gage	Span (ft-in.)							
		15'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	23'-0"	25'-0"
5½"	18	435/180	325/124	283/104	248/89	218/76	192/65	150/50	117/39
	16	523/200	394/137	344/116	303/98	267/84	236/73	187/55	149/43
5¾"	18	468/203	350/139	305/117	268/99	235/85	207/73	162/56	128/43
	16	557/223	419/153	367/129	323/109	285/94	252/81	199/61	159/48
8"	18	646/501	483/344	421/290	369/246	324/211	285/182	223/139	175/108
	16	803/546	605/375	530/315	466/268	411/230	365/198	289/151	230/117

Notes:
1. The composite deck-slab design is based on tested performance and engineering analysis in accordance Section 7.6.1 of CSSBI 12M-2024.
2. For high loads long term concrete creep should be considered.
3. Use Composite Deck-Slab Strength Web Based Solutions for alternate slabs.

3.5F-24 FL Deck-Slab Information

Total Slab Depth (in.)	Cover Depth (in.)	Theoretical Concrete Volume ($yd^3/100\ ft^2$)	Min. A_s for T&S ($in.^2$)	Recommended WWR for Temperature and Shrinkage
Normal Weight Concrete (145 pcf)				**f'_c = 3000 psi**
5½	**2**	1.41	0.028	6x6-W1.4xW1.4
5¾	**2¼**	1.49	0.028	6x6-W1.4xW1.4
6	**2½**	1.56	0.028	6x6-W1.4xW1.4
6½	**3**	1.72	0.028	6x6-W1.4xW1.4
7	**3½**	1.87	0.041	6x6-W2.1xW2.1
7¼	**3¾**	1.95	0.050	6x6-W2.5xW2.5
7½	**4**	2.03	0.059	6x6-W3.0xW3.0
8	**4½**	2.18	0.077	6x6-W4.0xW4.0
Light Weight Concrete (110 pcf)				**f'_c = 4000 psi**
5½	**2**	1.41	0.028	6x6-W1.4xW1.4
5¾	**2¼**	1.49	0.028	6x6-W1.4xW1.4
6	**2½**	1.56	0.028	6x6-W1.4xW1.4
6½	**3**	1.72	0.028	6x6-W1.4xW1.4
7	**3½**	1.87	0.041	6x6-W2.1xW2.1
7½	**4**	2.03	0.059	6x6-W3.0xW3.0
8	**4½**	2.18	0.077	6x6-W4.0xW4.0

Notes:

1. Recommended temperature and shrinkage reinforcement in accordance with CSSBI S3-2019, Table 2.