3.5DF-24 FL FORMLOK® DOVETAIL DECK
LIGHT WEIGHT CONCRETE (1840 kg/m³)

Metric LSD

Maximum Unshored Spans

Slab Depth			Maximum Unshored Construction Clear Span (mm)		
Total (mm)	Topping (mm)	Deck Gage	1	2	3
140	51	18	4608	5018	5186
		16	4870	5860	5632
145	56	18	4564	4950	5116
		16	4825	5782	5580
205	116	18	4159	4301	4445
		16	4404	5034	5093

Composite Deck-Slab Properties

Concrete + Deck (kPa)	Deflection $I_d = (I_{cr}+I_u)/2$ (mm^4x10^3/m)	Moment $øM_{no}$ (kN-m/m)	Shear $øV_{no}$ (kN/m)
2.3	18652.20	61.36	97
2.4	20723.46	72.62	97
2.4	20389.24	64.93	100
2.5	22507.04	75.93	100
3.5	52515.93	92.56	141
3.5	57209.63	112.35	141

Notes:

1. Maximum unshored spans are based on 1.0 kPa uniform construction live load and 2.2 kN/m 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, $øW_n$, / Deflection at L/360 (kPa)

LWC (1840 kg/m³), f'_c = 25 MPa

Total Slab Depth	Deck Gage	Span (mm)							
		4500	5100	5400	5700	6000	6300	6900	7500
140	18	21.3/8.9	15.9/6.1	13.9/5.1	12.2/4.4	10.7/3.7	9.4/3.2	7.4/2.4	5.8/1.9
	16	25.7/9.9	19.3/6.8	16.9/5.7	14.9/4.8	13.2/4.1	11.6/3.6	9.2/2.7	7.3/2.1
145	18	22.6/9.7	16.9/6.7	14.8/5.6	13.0/4.7	11.4/4.1	10.1/3.5	7.9/2.7	6.2/2.1
	16	26.9/10.7	20.3/7.3	17.7/6.2	15.6/5.3	13.8/4.5	12.2/3.9	9.7/3.0	7.7/2.3
205	18	32.2/25.0	24.1/17.1	21.0/14.5	18.4/12.3	16.2/10.5	14.3/9.1	11.2/6.9	8.8/5.4
	16	39.9/27.2	30.1/18.7	26.4/15.8	23.2/13.4	20.5/11.5	18.2/9.9	14.4/7.5	11.5/5.8

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. See Composite Deck-Slab Superimposed Load tool for alternate slabs.

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3.5F-24 FL Deck-Slab Information

Total Slab Depth (mm)	Cover Depth (mm)	Theoretical Concrete Volume (m^3/m^2)	Min. A_s for T&S (mm^2/m)	Recommended WWR for Temperature and Shrinkage
Normal Weight Concrete (2325 kg/m^3)				**f'_c = 20 MPa**
140	**51**	0.116	60	152x152-MW9.1xMW9.1
145	**56**	0.121	60	152x152-MW9.1xMW9.1
155	**66**	0.131	60	152x152-MW9.1xMW9.1
165	**76**	0.141	60	152x152-MW9.1xMW9.1
180	**91**	0.156	93	152x152-MW16xMW16
185	**96**	0.161	108	152x152-MW18.7xMW18.7
190	**101**	0.166	123	152x152-MW18.7xMW18.7
205	**116**	0.181	16	152x152-MW25.8xMW25.8
Light Weight Concrete (1840 kg/m^3)				**f'_c = 25 MPa**
140	**51**	0.116	60	152x152-MW9.1xMW9.1
145	**56**	0.121	60	152x152-MW9.1xMW9.1
155	**66**	0.131	60	152x152-MW9.1xMW9.1
165	**76**	0.141	60	152x152-MW9.1xMW9.1
180	**91**	0.156	93	152x152-MW16xMW16
190	**101**	0.166	123	152x152-MW18.7xMW18.7
205	**116**	0.181	168	152x152-MW25.8xMW25.8

Notes:

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