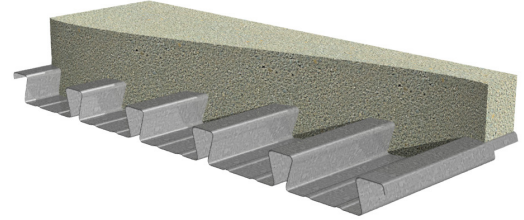


# 2.0DS-30 FL FORMLOK® DOVETAIL DECK GRADE 50 STEEL

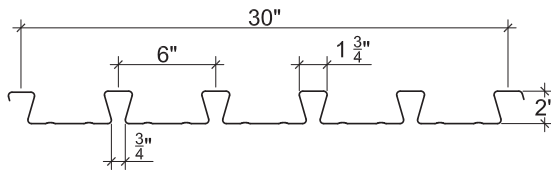
Imperial  
LSD

## 2.0DS-30 FL DOVETAIL DECK

- Enhanced 2-Coat Polyester Paint
- White Factory Primer Paint
- Galvanized Finish
- UL Listed



## Nominal Dimensions



Nested Side-lap

## Section Properties

Deck Gage	Deck Weight $w_{dd}$ (psf)	Base Metal Thickness $t$ (in.)	Yield Strength $F_y$ (ksi)	Effective Moment of Inertia at Service Load $I_d = (2I_e + I_p)/3$		Effective Section Modulus at $F_y = 50$ ksi		Factored Moment		Vertical Web Shear $\phi V_n$ (lb/ft)
				$I_{d+}$ (in <sup>4</sup> /ft)	$I_{d-}$ (in <sup>4</sup> /ft)	$S_{e+}$ (in <sup>3</sup> /ft)	$S_{e-}$ (in <sup>3</sup> /ft)	$\phi M_{n+}$ (lb-ft/ft)	$\phi M_{n-}$ (lb-ft/ft)	
22	2.2	0.0299	50	0.430	0.382	0.301	0.306	1130	1146	4268
20	2.7	0.0359	50	0.520	0.473	0.378	0.373	1417	1398	5092
18	3.6	0.0478	50	0.695	0.661	0.527	0.509	1977	1907	6694
16	4.5	0.0598	50	0.872	0.856	0.667	0.648	2501	2430	8262

## Factored Reactions at Supports Based on Web Crippling, $\phi R_n$ (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading					Two-Flange Loading						
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	1½"	2"	3"	4"	3"	5"	1½"	2"	3"	4"	3"	5"
22	1133	1246	1434	1592	2044	2355	1083	1166	1306	1424	2500	2910
20	1586	1738	1992	2206	2869	3286	1603	1721	1918	2085	3551	4108
18	2679	2921	3327	3669	4866	5514	2926	3125	3459	3740	6112	6997
16	4030	4377	4959	5449	7337	8241	4642	4938	5435	5853	9299	10553

## Standard Features

- ASTM A653/A653M SS GR50 Min., with Z275/G90 galvanized or ZF75/A25 galvanized
- Standard lengths – 6'-0" to 40'-0"
- UL Listed
- Cold-formed steel deck conforms to AISI S100-16 and meets the guidelines of CSSBI 12M-2024.

## Optional Features

- Inquire regarding cost and lead times for:
  - 21, 19 or 17 gage
  - Alternative metallic and painted finishes

# 2.0DS-30 FL FORMLOK® DOVETAIL DECK

## NORMAL WEIGHT CONCRETE (145 pcf)

Imperial  
LSD

Slab Depth		Maximum Unshored Spans			Composite Deck-Slab Properties				
		Deck Gage	Maximum Unshored Construction Clear Span			Concrete + Deck (psf)	Deflection $I_d = (I_{cr} + I_u)/2$ (in <sup>4</sup> /ft)	Moment $\phi M_{no}$ (kip-ft/ft)	Shear $\phi V_{no}$ (kip/ft)
Total	Topping		1	2	3				
4"	2"	22	8'-8"	9'-7"	9'-11"	45.5	5.74	6.08	5.21
		20	9'-8"	10'-7"	10'-11"	46.0	6.14	7.15	5.21
		18	10'-7"	12'-3"	12'-7"	46.9	6.85	9.18	5.21
		16	11'-4"	13'-9"	13'-4"	47.8	7.48	11.10	5.21
5¼"	3¼"	22	7'-10"	8'-8"	8'-10"	60.6	12.20	7.90	6.84
		20	8'-9"	9'-6"	9'-10"	61.1	13.00	9.32	6.84
		18	9'-8"	11'-1"	11'-5"	62.0	14.44	12.02	6.84
		16	10'-4"	12'-5"	12'-6"	62.9	15.73	14.60	6.84
5½"	3½"	22	7'-8"	8'-6"	8'-8"	63.6	13.88	8.27	7.17
		20	8'-8"	9'-4"	9'-8"	64.1	14.79	9.76	7.17
		18	9'-6"	10'-10"	11'-3"	65.0	16.41	12.60	7.17
		16	10'-2"	12'-3"	12'-4"	65.9	17.88	15.33	7.17

### 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, $\phi W_n$ / Deflection at L/360 (psf) NWC (145 pcf), $f'_c = 3000$ psi

Total Slab Depth	Deck Gage	Span (ft-in.)							
		10'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"
4"	22	429/250	281/145	231/114	191/91	159/74	133/61	93/43	64/31
	20	514/268	339/155	281/122	234/97	196/79	166/65	119/46	85/33
	18	675/299	451/173	375/136	315/109	267/88	228/73	167/51	124/37
	16	828/327	557/189	465/148	393/119	335/96	287/79	214/56	162/40
5¼"	22	556/533	363/308	298/242	246/194	205/157	171/130	119/91	82/66
	20	669/568	441/328	364/258	303/207	254/168	214/138	153/97	109/71
	18	883/630	590/365	491/287	412/229	349/186	297/154	219/108	162/78
	16	1089/687	732/397	612/312	517/250	440/203	377/167	281/117	213/85
5½"	22	582/606	379/351	311/276	258/221	214/179	178/148	124/104	85/75
	20	700/646	462/373	382/294	318/235	266/191	224/157	160/110	115/80
	18	926/717	618/415	515/326	433/261	366/212	312/175	229/122	170/89
	16	1144/781	769/452	643/355	543/284	462/231	396/190	296/133	224/97

### 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.