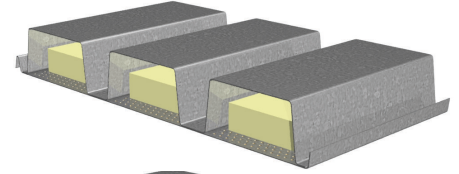


# PLNCD/NCD CELLULAR ACOUSTICAL DECK GRADE 50 STEEL

LRFD

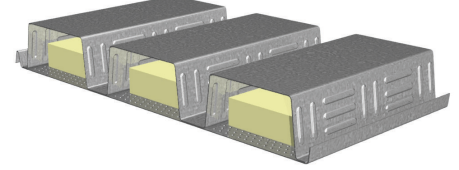
## N-24 CELLULAR ACOUSTICAL ROOF DECK

- PLNCD-24 AC Deck used with PunchLok® II System
- NCD-24 AC Deck used with TSWs or BPs

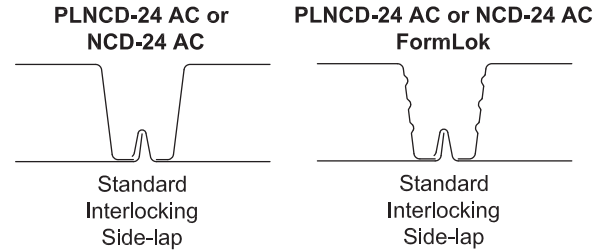
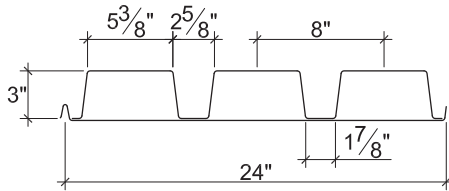


## N-24 CELLULAR ACOUSTICAL FORMLOK® COMPOSITE DECK

- PLNCD-24 AC FormLok Deck used with PunchLok® II System
- NCD-24 AC FormLok Deck used with TSWs or BPs



## Nominal Dimensions



## 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 $I_d = (2I_e + I_g)/3$		Effective Section Modulus at $F_y = 50$ ksi		Vertical Web Shear $\phi V_n$ (lb/ft)	Vertical Shear $\phi V_n$	
				$I_{d+}$ (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)		End	Interior
20/20	4.1	0.0359/0.0359	50	1.626	1.495	0.519	0.706	6097	878	1695
20/18	4.6	0.0359/0.0478	50	1.784	1.728	0.516	0.909	6097	814	1255
18/20	4.8	0.0478/0.0359	50	2.090	1.838	0.798	0.852	10772	960	2022
18/18	5.3	0.0478/0.0478	50	2.293	2.105	0.819	1.055	10772	1335	2191
18/16	5.8	0.0478/0.0598	50	2.465	2.385	0.836	1.318	10772	1258	1767
16/18	6.1	0.0598/0.0478	50	2.786	2.459	1.111	1.199	13429	1429	2469
16/16	6.6	0.0598/0.0598	50	3.005	2.774	1.134	1.475	13429	1853	2703

## Design 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	
	1 1/2"	2"	3"	4"	4"	8"	1 1/2"	2"	3"	4"	4"	8"
20/XX	1286	1409	1615	1789	2711	3360	1327	1424	1588	1726	3244	4077
18/XX	2197	2395	2728	3008	4587	5740	2477	2646	2928	3166	5607	7128
16/XX	3334	3621	4102	4507	6912	8563	3991	4246	4672	5032	8559	10780

## Standard Features

- ASTM A653 SS GR50 Min., with G60
- Standard lengths – 7'-6" to 30'-0"
- IAPMO UES ER-2018, UL, and FM Listed
- Tables conform to ANSI/SDI RD-2017 and C-2017

## Optional Features

- Inquire regarding cost and lead times for:
  - Sheet Lengths > 30'-0"
  - Alternative metallic finishes

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