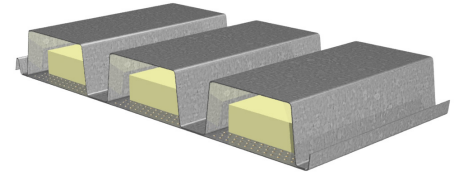


3NPA-24 CELLULAR ACOUSTICAL DECK GRADE 40 STEEL

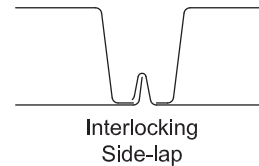
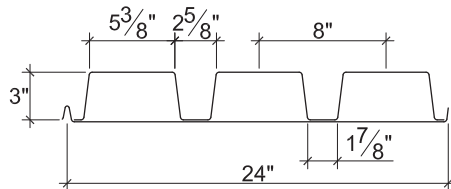
LRFD

24" WIDE 3NP CELLULAR ACOUSTICAL ROOF DECK

- 3NPA-24 Deck used with TSWs or BPs
- 3NPLPA-24 Deck used with PunchLok® II System



Nominal Dimensions



Plant	Cover Width	Pan Connection Method
VNY	24"	Flush Rivets (Underside)
VNE	24"	Resistance Welds

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 $F_y = 40$ ksi		Design Moment		Vertical Web Shear ϕV_n (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	ϕM_{n+} (lb-ft/ft)	ϕM_{n-} (lb-ft/ft)	
20/20	3.8	0.0358/0.0358	40	1.684	1.419	0.522	0.543	1566	1629	5455
20/18	4.3	0.0358/0.0474	40	1.834	1.563	0.537	0.628	1611	1884	5455
18/20	4.6	0.0474/0.0358	40	2.151	1.773	0.809	0.707	2427	2121	8721
18/18	5.0	0.0474/0.0474	40	2.351	1.937	0.829	0.791	2487	2373	8721
18/16	5.6	0.0474/0.0598	40	2.532	2.035	0.847	0.797	2541	2391	8721
16/18	5.9	0.0598/0.0474	40	2.883	2.321	1.139	0.952	3417	2856	10951
16/16	6.4	0.0598/0.0598	40	3.111	2.434	1.163	0.955	3489	2865	10951

Design Reactions at Supports Based on Web Crippling, ϕR_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	1021	1119	1282	1420	2158	2672	1050	1127	1257	1366	2577	3236
18/XX	1729	1886	2148	2369	3619	4532	1942	2074	2296	2483	4414	5618
16/XX	2670	2899	3284	3609	5543	6878	3191	3395	3736	4024	6856	8651

Standard Features

- ASTM A653 SS GR40 Min., with G60
- Standard lengths – 6'-0" to 42'-0"
- IAPMO UES ER-0652 and FM Listed
- Tables conform to ANSI/SDI RD-2017

Optional Features

- Inquire regarding cost and lead times for:
 - Short Cuts < 6'-0"
 - Sheet Lengths > 42'-0"
 - Alternative metallic finishes

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