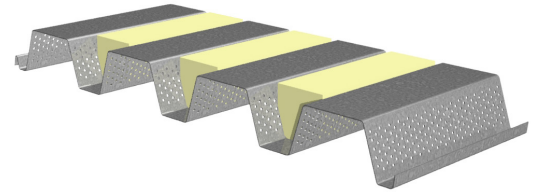


# 3NLA-32/3NIA-32/3PLNA-32 ACOUSTICAL ROOF DECKS GRADE 50 STEEL

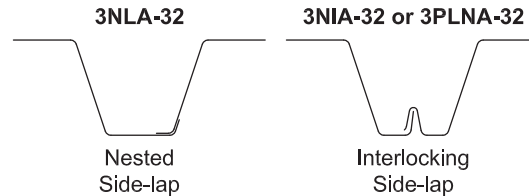
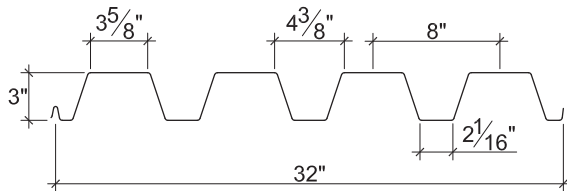
ASD

## 32" WIDE 3N ACOUSTICAL ROOF DECKS

- 3NLA-32 Deck used with Side-lap Screws
- 3NIA-32 Deck used with TSWs or BPs
- 3PLNA-32 Deck used with PunchLok® II System



## 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		Allowable Moment		Vertical Web Shear $V_n/\Omega$ (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)	$M_{n+}/\Omega$ (lb-ft/ft)	$M_{n-}/\Omega$ (lb-ft/ft)	
22	1.7	0.0295	50	0.611	0.680	0.328	0.353	819	881	1632
20	2.1	0.0358	50	0.766	0.842	0.426	0.452	1063	1128	2821
19	2.4	0.0418	50	0.917	1.000	0.526	0.550	1313	1372	3845
18	2.8	0.0474	50	1.067	1.140	0.627	0.641	1565	1599	4948
16	3.5	0.0598	50	1.405	1.448	0.826	0.841	2061	2098	6798

## Allowable Reactions at Supports Based on Web Crippling, $R_n/\Omega$ (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"
22	510	561	645	717	1178	1369	459	495	554	604	1331	1561
20	741	812	931	1031	1688	2090	724	777	866	942	1950	2448
19	997	1089	1244	1375	2246	2827	1031	1103	1225	1328	2635	3370
18	1267	1381	1573	1735	2833	3549	1366	1459	1616	1747	3361	4277
16	1968	2138	2422	2661	4346	5394	2277	2422	2666	2871	5247	6620

## Standard Features

- ASTM A653 SS GR50 Min., with G60 or G90, white or gray primer optional
- ASTM A1008 SS GR50 Min. with gray primer
- 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 and painted finishes

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## Inward Uniform Allowable Loads, ASD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			4'-0"	6'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
22	Single	$W_n / \Omega$	409	182	102	81	65	54	45	33	26	20	16
		L/240	---	---	78	55	40	30	23	15	10	7	5
	Double	$W_n / \Omega$	365	179	104	83	68	57	48	35	27	22	17
		L/240	---	---	---	---	---	---	---	---	26	18	13
	Triple	$W_n / \Omega$	428	215	128	102	84	70	59	44			
		L/240	---	---	---	---	---	63	49	31			
20	Single	$W_n / \Omega$	531	236	133	105	85	70	59	43	33	26	21
		L/240	---	232	98	69	50	38	29	18	12	9	6
	Double	$W_n / \Omega$	504	238	137	109	88	73	62	46	35	28	22
		L/240	---	---	---	---	---	---	---	---	32	23	17
	Triple	$W_n / \Omega$	604	291	169	135	110	91	77	57			
		L/240	---	---	---	---	104	78	60	38			
19	Single	$W_n / \Omega$	656	292	164	130	105	87	73	54	41	32	26
		L/240	---	278	117	82	60	45	35	22	15	10	8
	Double	$W_n / \Omega$	627	292	167	133	108	90	75	56	43	34	27
		L/240	---	---	---	---	---	---	---	---	39	27	20
	Triple	$W_n / \Omega$	756	359	207	165	134	111	94	69			
		L/240	---	---	---	---	124	93	72	45			
18	Single	$W_n / \Omega$	782	348	196	155	125	103	87	64	49	39	31
		L/240	---	324	137	96	70	53	40	25	17	12	9
	Double	$W_n / \Omega$	741	343	196	155	126	105	88	65	50	39	32
		L/240	---	---	---	---	---	---	---	---	44	31	23
	Triple	$W_n / \Omega$	899	423	243	193	157	130	110	81			
		L/240	---	---	---	---	141	106	82	51			
16	Single	$W_n / \Omega$	1031	458	258	204	165	136	115	84	64	51	41
		L/240	---	426	180	126	92	69	53	34	22	16	12
	Double	$W_n / \Omega$	979	452	258	204	166	137	116	85	65	52	42
		L/240	---	---	---	---	---	---	---	83	56	39	29
	Triple	$W_n / \Omega$	1190	557	319	254	206	171	144	106			
		L/240	---	---	---	246	179	135	104	65			

### Notes:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.
2. The symbol "----" indicates that the uniform allowable load based on deflection exceeds the allowable load based on stress.

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