

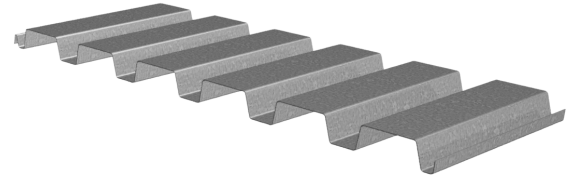
1.5B-36/1.5BI-36/1.5PLB-36 ROOF DECKS

GRADE 50 STEEL

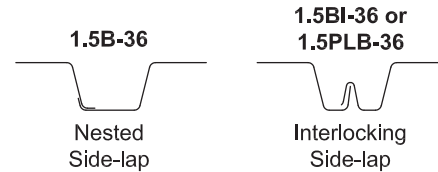
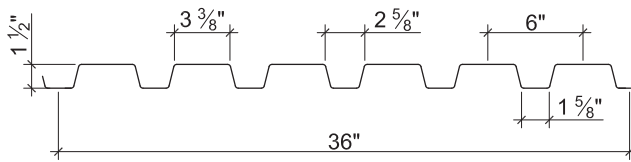
LRFD

1.5B ROOF DECKS

- 1.5B-36 Deck used with Side-lap Screws
- 1.5BI-36 Deck used with TSWs or BPs
- 1.5PLB-36 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		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)	
22	1.6	0.0295	50	0.155	0.178	0.169	0.179	634	671	4035
20	2.0	0.0358	50	0.197	0.217	0.224	0.229	840	859	4874
19	2.3	0.0418	50	0.239	0.257	0.266	0.278	997	1042	5666
18	2.6	0.0474	50	0.277	0.290	0.306	0.318	1148	1193	6398
16	3.3	0.0598	50	0.364	0.367	0.393	0.402	1474	1508	7996

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"	3"	4"	1 1/2"	2"	3"	4"	3"	4"
22	1235	1357	1563	1706	2204	2383	1289	1389	1556	1672	2728	2966
20	1763	1932	2215	2408	3164	3406	1949	2093	2333	2497	3960	4286
19	2344	2562	2927	3169	4222	4527	2702	2893	3213	3426	5324	5740
18	2954	3221	3669	3959	5334	5699	3515	3754	4156	4417	6762	7265
16	4525	4915	5568	5967	8206	8709	5681	6043	6651	7023	10487	11191

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, UL, 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
- Web Perforated Acoustical Versions

1.5B-36/1.5BI-36/1.5PLB-36 ROOF DECKS

GRADE 50 STEEL

LRFD

Inward Uniform Design Loads, LRFD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
22	Single	ϕW_n	1267	563	317	203	141	103	79	63	51	42	35
		L/240	1270	376	159	81	47	30	20	14	10	8	6
	Double	ϕW_n	1240	575	329	212	148	109	83	66	54	44	37
		L/240	3514	1041	439	225	130	82	55	39	28	21	16
	Triple	ϕW_n	1502	708	407	263	184	136	104	82	67	55	46
		L/240	2754	816	344	176	102	64	43	30	22	17	13
20	Single	ϕW_n	1679	746	420	269	187	137	105	83	67	56	47
		L/240	1614	478	202	103	60	38	25	18	13	10	7
	Double	ϕW_n	1572	732	419	271	189	139	107	84	68	57	48
		L/240	4283	1269	535	274	159	100	67	47	34	26	20
	Triple	ϕW_n	1898	900	519	336	235	173	133	105	85	71	59
		L/240	3357	995	420	215	124	78	52	37	27	20	16
19	Single	ϕW_n	1994	886	499	319	222	163	125	98	80	66	55
		L/240	1958	580	245	125	73	46	31	21	16	12	9
	Double	ϕW_n	1894	886	508	328	229	169	129	102	83	69	58
		L/240	5073	1503	634	325	188	118	79	56	41	30	23
	Triple	ϕW_n	2281	1087	628	407	285	210	161	128	104	86	72
		L/240	3976	1178	497	254	147	93	62	44	32	24	18
18	Single	ϕW_n	2295	1020	574	367	255	187	143	113	92	76	64
		L/240	2270	673	284	145	84	53	35	25	18	14	11
	Double	ϕW_n	2162	1012	581	375	262	193	148	117	95	79	66
		L/240	5724	1696	716	366	212	134	89	63	46	34	27
	Triple	ϕW_n	2602	1242	718	465	326	240	185	146	119	98	82
		L/240	4487	1329	561	287	166	105	70	49	36	27	21
16	Single	ϕW_n	2948	1310	737	472	328	241	184	146	118	97	82
		L/240	2983	884	373	191	110	70	47	33	24	18	14
	Double	ϕW_n	2727	1278	734	474	331	244	187	148	120	99	83
		L/240	7244	2146	906	464	268	169	113	79	58	44	34
	Triple	ϕW_n	3280	1567	907	588	412	304	233	185	150	124	104
		L/240	5678	1682	710	363	210	132	89	62	45	34	26

Note:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.

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