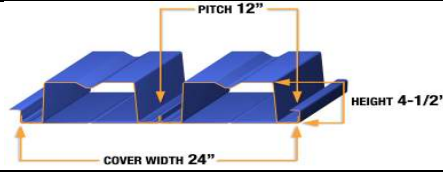


SECTION PROPERTIES $f_y = 40 \text{ ksi}$

GAGE	Wd	I _b (DEFLECTION)	S _p	S _n	R _{be}			R _{bi}		V _a
					4"	5"	6"	5"	6"	
20/20	4.47	4.667	1.205	1.542	900	977	1046	1628	1732	2847
20/18	5.04	4.974	1.206	1.593	900	977	1046	1628	1732	2847
18/20	5.34	5.952	1.859	2.007	1515	1639	1752	2700	2864	6429
18/18	5.91	6.412	1.860	2.069	1515	1639	1752	2700	2864	6429
18/16	6.52	6.820	1.855	2.125	1515	1639	1752	2700	2864	6429



LRFD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LRFD LOADS, psf														
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN				
		GAGE														
		20/20	20/18	18/20	18/18	18/16	20/20	20/18	18/20	18/18	18/16	20/20	20/18	18/20	18/18	18/16
11'-0"	$\lambda_D D + \lambda_L L$ (Strength)	158*	158*	269*	268*	268*	121*	120*	202*	201*	200*	138*	137*	230*	230*	229*
	D+L (Deflection)	158	158	269	268	268	121	120	202	201	200	138	137	230	230	229
	L (Deflection)	153	158	196	211	224	121	120	202	201	200	138	137	230	230	229
12'-0"	$\lambda_D D + \lambda_L L$ (Strength)	145*	144*	246*	245*	245*	110*	109*	184*	184*	184*	126*	125*	211*	210*	210*
	D+L (Deflection)	145	144	221	238	245	110	109	184	184	184	126	125	211	210	210
	L (Deflection)	118	126	151	162	173	110	109	184	184	184	126	125	211	210	210
13'-0"	$\lambda_D D + \lambda_L L$ (Strength)	133*	132*	227*	226*	226*	101*	101*	170*	169*	169*	116*	115*	194*	193*	193*
	D+L (Deflection)	133	132	173	186	198	101	101	170	169	169	116	115	194	193	193
	L (Deflection)	93	99	119	128	136	101	101	170	169	169	116	115	194	193	193
14'-0"	$\lambda_D D + \lambda_L L$ (Strength)	123*	122*	210*	209*	209*	94*	93*	157*	157*	157*	107*	106*	180*	179*	179*
	D+L (Deflection)	107	114	137	148	157	94	93	157	157	157	107	106	180	179	179
	L (Deflection)	74	79	95	102	109	94	93	157	157	157	107	106	179	179	179
15'-0"	$\lambda_D D + \lambda_L L$ (Strength)	115*	114*	196*	195*	195*	87*	86*	146*	146*	146*	100*	99*	167*	166*	166*
	D+L (Deflection)	86	92	110	119	127	87	86	146	146	146	100	99	167	166	166
	L (Deflection)	61	65	77	83	88	87	86	146	146	146	100	99	145	157	166
16'-0"	$\lambda_D D + \lambda_L L$ (Strength)	107*	106*	178	177	176	81*	81*	137*	136*	136*	93*	92*	156*	156*	156*
	D+L (Deflection)	70	75	90	97	103	81	81	137	136	136	93	92	156	156	156
	L (Deflection)	50	53	64	69	73	81	81	137	136	136	93	92	120	129	137
17'-0"	$\lambda_D D + \lambda_L L$ (Strength)	100	100	157	156	156	76*	75*	128*	128*	128*					
	D+L (Deflection)	58	61	74	80	85	76	75	128	128	128					
	L (Deflection)	42	44	53	57	61	76	75	128	128	128					
18'-0"	$\lambda_D D + \lambda_L L$ (Strength)	89	88	139	138	138	72*	71*	121*	120*	120*					
	D+L (Deflection)	48	51	62	66	71	72	71	121	120	120					
	L (Deflection)	35	37	45	48	51	72	71	108	116	120					
19'-0"	$\lambda_D D + \lambda_L L$ (Strength)	79	79	124	123	123	68*	67*	114*	113*	113*					
	D+L (Deflection)	40	43	52	55	59	68	67	114	113	113					
	L (Deflection)	30	32	38	41	44	68	67	91	99	105					
20'-0"	$\lambda_D D + \lambda_L L$ (Strength)	71	70	111	111	110	64*	63*	108*	107*	107*					
	D+L (Deflection)	34	36	44	47	50	64	63	108	107	107					
	L (Deflection)	26	27	33	35	37	61	63	78	84	90					
21'-0"	$\lambda_D D + \lambda_L L$ (Strength)	64	63	100	100	99	61*	60*	103*	102*	102*					
	D+L (Deflection)	27	29	35	37	40	61	60	91	98	102					
	L (Deflection)	22	24	28	30	32	53	57	68	73	78					
22'-0"	$\lambda_D D + \lambda_L L$ (Strength)	58	57	91	90	90	57*	57*	96*	97*	97*					
	D+L (Deflection)	22	23	28	30	32	57	57	75	81	86					
	L (Deflection)	19	20	24	26	28	46	49	59	63	67					
23'-0"	$\lambda_D D + \lambda_L L$ (Strength)	52	52	83	82	82	52*	53*	88*	89*	91*					
	D+L (Deflection)	17	18	23	24	26	48	51	62	67	71					
	L (Deflection)	17	18	21	23	25	40	43	52	56	59					
24'-0"	$\lambda_D D + \lambda_L L$ (Strength)	48	47	75	75	74	47*	48*	80*	81*	83*					
	D+L (Deflection)	14	15	18	19	21	40	42	51	55	59					
	L (Deflection)	14	15	18	19	21	36	38	45	49	52					

11'-0"	$\lambda_D D + \lambda_L L$ (Strength)	158*	← Max. superimposed factored LRFD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	158	← Max. superimposed unfactored LRFD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	153	← Max. superimposed unfactored LRFD live load (psf) (governed by deflection limitation)

↑ Vertical load span (center to center spacing)

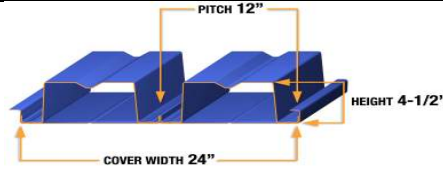
- Wd** Weight of deck (uncoated), psf
- I_b** Moment of inertia for deflection per foot of deck width (in⁴/ft)
- S_p** Section modulus for positive bending per foot of deck width, (in³/ft)
- S_n** Section modulus for negative bending per foot of deck width, (in³/ft)
- λ_D, λ_L Load factors for D & L loads to be applied by Engineer in accordance with Building Codes.
- R_{be}** Allowable exterior web crippling value per foot of deck, pif
- R_{bi}** Allowable interior web crippling value per foot of deck, pif
- V_a** Allowable shear value per foot of deck width, pif
- D** Uniform dead load, psf
- L** Uniform live load, psf

- Notes:**
- Bending strength based on flexural stress limit of 38 ksi.
 - Loads marked with asterisk (*) are governed by moment & shear, interior (6" bearing) and exterior (4" bearing) reactions (web crippling) or moment & reactions.
 - Deflection based on maximum dead + live load deflection of L/240 or 1 in. and on maximum live load deflection of L/360 or 1 in.
 - An upper limit of 400 psf has been applied to the loads.
 - Deck length over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group® for further information.

The section properties table is based on 2001 AISI's North American Specification for the Design of Cold-Formed Steel Structural Members (2004 Supplement). Acoustical profile is also available.

SECTION PROPERTIES $f_y = 40 \text{ ksi}$

GAGE	Wd	I _D (DEFLECTION)	S _p	S _n	R _{be}			R _{bi}		V _a
					4"	5"	6"	5"	6"	
16/18	6.85	7.685	2.531	2.571	2322	2506	2673	4100	4339	10233
16/16	7.46	8.180	2.570	2.639	2322	2506	2673	4100	4339	10233
16/14	8.19	8.682	2.608	2.701	2322	2506	2673	4100	4339	10233
14/16	8.59	9.665	3.372	3.248	3487	3753	3994	6118	6458	14726
14/14	9.32	10.264	3.422	3.326	3487	3753	3994	6118	6458	14726



LRFD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LRFD LOADS, psf														
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN				
		GAGE														
		16/18	16/16	16/14	14/16	14/14	16/18	16/16	16/14	14/16	14/14	16/18	16/16	16/14	14/16	14/14
15'-0"	$\lambda_D D + \lambda_L L$ (Strength)	277	280	284	369	374	223*	222*	222*	334*	333*	255*	254*	253*	381*	380*
	D+L (Deflection)	143	152	161	179	190	223	222	222	334	333	255	254	253	346	367
	L (Deflection)	100	106	113	125	133	223	222	222	302	320	188	200	212	236	251
16'-0"	$\lambda_D D + \lambda_L L$ (Strength)	242	245	248	323	328	209*	208*	207*	304*	311*	238*	238*	237*	357*	357*
	D+L (Deflection)	116	124	131	146	156	209	208	207	304	311	225	238	237	283	301
	L (Deflection)	82	87	93	103	110	198	208	207	249	264	155	165	175	195	207
17'-0"	$\lambda_D D + \lambda_L L$ (Strength)	214	216	219	285	290	196*	195*	194*	269*	275*					
	D+L (Deflection)	96	102	108	121	129	196	195	194	269	275					
	L (Deflection)	68	73	77	86	91	165	175	186	207	220					
18'-0"	$\lambda_D D + \lambda_L L$ (Strength)	190	192	194	253	257	185*	184*	183*	239*	245*					
	D+L (Deflection)	80	85	90	100	107	185	184	183	239	245					
	L (Deflection)	58	61	65	73	77	139	148	157	175	185					
19'-0"	$\lambda_D D + \lambda_L L$ (Strength)	169	171	173	226	230	168*	172*	173*	214*	219*					
	D+L (Deflection)	67	71	75	84	90	168	172	173	214	219					
	L (Deflection)	49	52	55	62	66	118	126	133	148	158					
20'-0"	$\lambda_D D + \lambda_L L$ (Strength)	152	154	155	203	206	151*	155*	158*	192*	197*					
	D+L (Deflection)	56	60	63	71	76	145	154	158	182	194					
	L (Deflection)	42	45	48	53	56	101	108	114	127	135					
21'-0"	$\lambda_D D + \lambda_L L$ (Strength)	137	139	140	183	186	137*	140*	142*	174*	178*					
	D+L (Deflection)	45	48	50	57	61	118	126	133	149	158					
	L (Deflection)	36	39	41	46	49	87	93	99	110	117					
22'-0"	$\lambda_D D + \lambda_L L$ (Strength)	124	126	127	166	169	124*	127*	129*	158*	162*					
	D+L (Deflection)	36	38	40	46	49	97	103	109	122	130					
	L (Deflection)	32	34	36	40	42	76	81	86	96	102					
23'-0"	$\lambda_D D + \lambda_L L$ (Strength)	113	114	115	151	154	113*	115*	117*	143*	147*					
	D+L (Deflection)	29	31	33	37	40	80	85	90	101	107					
	L (Deflection)	28	29	31	35	37	67	71	75	84	89					
24'-0"	$\lambda_D D + \lambda_L L$ (Strength)	103	104	105	138	140	103*	105*	107*	131*	134*					
	D+L (Deflection)	24	25	26	30	32	66	70	75	84	89					
	L (Deflection)	24	25	26	30	32	59	62	66	74	78					
25'-0"	$\lambda_D D + \lambda_L L$ (Strength)	94	95	96	126	128										
	D+L (Deflection)	19	20	21	24	26										
	L (Deflection)	19	20	21	24	26										
26'-0"	$\lambda_D D + \lambda_L L$ (Strength)	87	87	88	116	118										
	D+L (Deflection)	15	16	17	19	21										
	L (Deflection)	15	16	17	19	21										
27'-0"	$\lambda_D D + \lambda_L L$ (Strength)	80	80	81	107	109										
	D+L (Deflection)	12	13	13	15	17										
	L (Deflection)	12	13	13	15	17										
28'-0"	$\lambda_D D + \lambda_L L$ (Strength)	74	74	74	99	100										
	D+L (Deflection)	10	10	10	12	13										
	L (Deflection)	10	10	10	12	13										

15'-0"	$\lambda_D D + \lambda_L L$ (Strength)	277	← Max. superimposed factored LRFD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	143	← Max. superimposed unfactored LRFD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	100	← Max. superimposed unfactored LRFD live load (psf) (governed by deflection limitation)

↑ Vertical load span (center to center spacing)

- Wd** Weight of deck (uncoated), psf
- I_D** Moment of inertia for deflection per foot of deck width (in⁴/ft)
- S_p** Section modulus for positive bending per foot of deck width, (in³/ft)
- S_n** Section modulus for negative bending per foot of deck width, (in³/ft)
- λ_D, λ_L Load factors for D & L loads to be applied by Engineer in accordance with Building Codes.
- R_{be}** Allowable exterior web crippling value per foot of deck, plf
- R_{bi}** Allowable interior web crippling value per foot of deck, plf
- V_a** Allowable shear value per foot of deck width, plf
- D** Uniform dead load, psf
- L** Uniform live load, psf

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