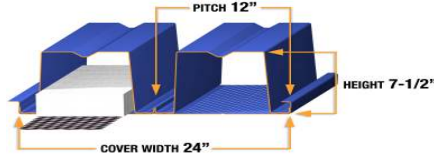


SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	Ip	In	Sp	Sn	Rbe			Rbi			Va
						4"	5"	6"	4"	5"	6"	
20/20	5.01	12.718	12.359	2.056	2.899	708	769	824	1317	1417	1507	1420
20/18	5.53	13.481	13.973	2.058	3.004	708	769	824	1317	1417	1507	1420
18/20	6.11	17.251	15.171	3.190	3.759	1219	1319	1410	2196	2354	2497	3300
18/18	6.63	18.280	16.924	3.180	3.884	1219	1319	1410	2196	2354	2497	3300
18/16	7.19	19.219	18.887	3.175	4.001	1219	1319	1410	2196	2354	2497	3300



LSD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LSD 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
15' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	88*	88*	155*	154*	154*	74*	73*	126*	125*	124*	85*	84*	144*	143*	142*
	D+L (Deflection)	88	88	155	154	154	74	73	126	125	124	85	84	144	143	142
	L (Deflection)	88	88	155	154	154	74	73	126	125	124	85	84	144	143	142
16' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	82*	82*	145*	144*	143*	69*	68*	117*	117*	116*	79*	79*	134*	134*	133*
	D+L (Deflection)	82	82	145	144	143	69	68	117	117	116	79	79	134	134	133
	L (Deflection)	82	82	145	144	143	69	68	117	117	116	79	79	134	134	133
17' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	77*	76*	136*	135*	134*	65*	64*	110*	109*	108*					
	D+L (Deflection)	77	76	136	135	134	65	64	110	109	108					
	L (Deflection)	77	76	136	135	134	65	64	110	109	108					
18' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	72*	72*	128*	127*	126*	61*	60*	103*	103*	102*					
	D+L (Deflection)	72	72	128	127	126	61	60	103	103	102					
	L (Deflection)	72	72	128	127	126	61	60	103	103	102					
19' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	68*	68*	121*	120*	119*	57*	57*	97*	97*	96*					
	D+L (Deflection)	68	68	121	120	119	57	57	97	97	96					
	L (Deflection)	68	68	121	120	119	57	57	97	97	96					
20' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	65*	64*	114*	114*	113*	54*	53*	92*	92*	91*					
	D+L (Deflection)	65	64	114	114	113	54	53	92	92	91					
	L (Deflection)	65	64	94	100	105	54	53	92	92	91					
21' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	61*	61*	108*	108*	107*	51*	51*	87*	87*	86*					
	D+L (Deflection)	61	61	108	108	107	51	51	87	87	86					
	L (Deflection)	60	61	82	86	91	51	51	87	87	86					
22' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	58*	57*	103*	103*	102*	49*	48*	83*	82*	82*					
	D+L (Deflection)	58	57	100	103	102	49	48	83	82	82					
	L (Deflection)	52	55	71	75	79	49	48	83	82	82					
23' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	55*	55*	98*	98*	97*	46*	46*	79*	79*	78*					
	D+L (Deflection)	55	55	87	92	97	46	46	79	79	78					
	L (Deflection)	46	49	62	66	69	46	46	79	79	78					
24' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	53*	52*	94*	93*	93*	44*	43*	76*	75*	74*					
	D+L (Deflection)	53	52	76	80	84	44	43	76	75	74					
	L (Deflection)	40	43	55	58	61	44	43	76	75	74					
25' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	50*	50*	90*	89*	89*										
	D+L (Deflection)	48	50	66	70	74										
	L (Deflection)	36	38	48	51	54										
26' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	48*	48*	86*	85*	85*										
	D+L (Deflection)	42	45	58	62	65										
	L (Deflection)	32	34	43	46	48										
27' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	46*	46*	83*	82*	81*										
	D+L (Deflection)	37	39	51	54	57										
	L (Deflection)	28	30	38	41	43										
28' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	44*	44*	79*	79*	78*										
	D+L (Deflection)	33	35	45	48	50										
	L (Deflection)	25	27	34	36	38										

15' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	88*	← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	88	← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240)
	L (Deflection)	88	← Max. superimposed unfactored LSD live load (psf) (governed by deflection limitation of L/360)
			← Vertical load span (center to center spacing)

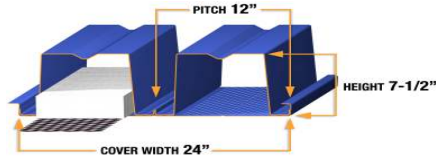
Wd	Weight of deck (uncoated), psf	Rbe	Allowable exterior web crippling value per foot of deck width, pif
Ip	Moment of inertia for positive bending per foot of deck width, (in ⁴)/ft	Rbi	Allowable interior web crippling value per foot of deck width, pif
In	Moment of inertia for negative bending per foot of deck width, (in ⁴)/ft	Va	Allowable shear value per foot of deck width, pif
Sp	Section modulus for positive bending per foot of deck width, (in ³)/ft	D	Uniform dead load, psf
Sn	Section modulus for negative bending per foot of deck width, (in ³)/ft	L	Uniform live load, psf
α_D, α_L	Load factors for D & L loads to be applied by Engineer in accordance with Building Codes.		

- Notes:**
- Bending strength based on allowable flexural stress of 36 ksi.
 - Loads marked with asterisk (*) are governed by interior (6" bearing) or exterior (4" bearing) reactions (web crippling).
 - Loads marked with two asterisks (**) are governed by moment & shear or moment & reactions (web crippling) assuming 6" of interior bearing.
 - 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). Loads are calculated in accordance with requirements of CSSBI 10M-06. *Standard for Steel Roof Deck*. Acoustical profile is also available.

SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	Ip	In	Sp	Sn	Rbe			Rbi			Va
						4"	5"	6"	4"	5"	6"	
16/18	7.81	22.489	20.007	4.603	4.809	1896	2046	2182	3350	3580	3788	6637
16/16	8.37	23.990	22.013	4.575	4.947	1896	2046	2182	3350	3580	3788	6637
16/14	9.04	25.423	24.623	4.556	5.078	1896	2046	2182	3350	3580	3788	6637
14/16	9.78	28.212	25.699	6.294	6.066	2880	3100	3298	5019	5347	5644	12962
14/14	10.45	30.041	28.485	6.416	6.237	2880	3100	3298	5019	5347	5644	12962



LSD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LSD 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
22' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	163*	162*	161*	250*	249*	128*	127*	126*	193*	192*				
	D+L (Deflection)	131	140	148	164	175	128	127	126	193	192				
	L (Deflection)	92	99	105	116	123	128	127	126	193	192				
23' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	155*	154*	154*	238*	237*	122*	121*	120*	180**	182**				
	D+L (Deflection)	114	121	128	142	152	122	121	120	180	182				
	L (Deflection)	81	86	91	102	108	122	121	120	180	182				
24' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	148*	148*	147*	228*	227*	116**	116*	115*	167**	168**				
	D+L (Deflection)	99	106	112	124	132	116	116	115	167	168				
	L (Deflection)	71	76	81	89	95	116	116	115	167	168				
25' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	142*	141*	140*	218*	217*									
	D+L (Deflection)	87	92	98	109	116									
	L (Deflection)	63	67	71	79	84									
26' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	136*	135*	135*	209*	208*									
	D+L (Deflection)	76	81	86	96	102									
	L (Deflection)	56	60	63	70	75									
27' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	131*	130*	129*	195	198									
	D+L (Deflection)	67	72	76	84	90									
	L (Deflection)	50	53	57	63	67									
28' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	126*	125*	124*	180	183									
	D+L (Deflection)	59	63	67	75	79									
	L (Deflection)	45	48	51	56	60									
29' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	121*	120	119	167	170									
	D+L (Deflection)	53	56	59	66	70									
	L (Deflection)	40	43	46	51	54									
30' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	113	112	110	156	158									
	D+L (Deflection)	47	50	53	59	63									
	L (Deflection)	36	39	41	46	49									
31' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	105	104	102	145	147									
	D+L (Deflection)	42	45	47	52	56									
	L (Deflection)	33	35	37	41	44									
32' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	98	97	95	135	137									
	D+L (Deflection)	37	40	42	47	50									
	L (Deflection)	30	32	34	38	40									
33' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	92	90	89	126	128									
	D+L (Deflection)	33	35	37	42	44									
	L (Deflection)	27	29	31	34	37									
34' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	86	85	83	118	120									
	D+L (Deflection)	30	32	33	37	40									
	L (Deflection)	25	27	28	31	33									
35' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	80	79	78	111	113									
	D+L (Deflection)	27	28	30	33	36									
	L (Deflection)	23	24	26	29	31									

22' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	163*	← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	131	← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240)
	L (Deflection)	92	← Max. superimposed unfactored LSD live load (psf) (governed by deflection limitation of L/360)
			← Vertical load span (center to center spacing)

- Wd** Weight of deck (uncoated), psf
Ip Moment of inertia for positive bending per foot of deck width, (in⁴)/ft
In Moment of inertia for negative bending per foot of deck width, (in⁴)/ft
Sp Section modulus for positive bending per foot of deck width, (in³)/ft
Sn Section modulus for negative bending per foot of deck width, (in³)/ft
 α_D, α_L Load factors for D & L loads to be applied by Engineer in accordance with Building Codes.
- Rbe** Allowable exterior web crippling value per foot of deck width, pif
Rbi Allowable interior web crippling value per foot of deck width, pif
Va Allowable shear value per foot of deck width, pif
D Uniform dead load, psf
L Uniform live load, psf

- Notes:**
- Bending strength based on allowable flexural stress of 36 ksi.
 - Loads marked with asterisk (*) are governed by interior (6" bearing) or exterior (4" bearing) reactions (web crippling).
 - Loads marked with two asterisks (**) are governed by moment & shear or moment & reactions (web crippling) assuming 6" of interior bearing.
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