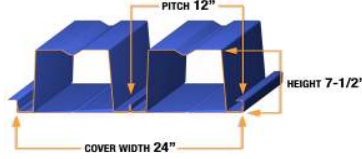


**SECTION PROPERTIES**

fy=40 ksi

GAGE	Wd	Ip	In	Sp	Sn	Rbe			Rbi			Va
						4"	5"	6"	4"	5"	6"	
20/20	5.16	12.977	12.376	2.057	2.900	708	769	824	1317	1417	1507	1420
20/18	5.73	13.755	14.012	2.059	3.006	708	769	824	1317	1417	1507	1420
18/20	6.27	17.593	15.188	3.187	3.760	1219	1319	1410	2196	2354	2497	3300
18/18	6.84	18.661	16.961	3.178	3.886	1219	1319	1410	2196	2354	2497	3300
18/16	7.45	19.622	18.969	3.174	4.005	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*	87*	155*	154*	153*	74*	73*	125*	125*	124*	85*	84*	143*	143*	142*
	D+L (Deflection)	88	87	155	154	153	74	73	125	125	124	85	84	143	143	142
	L (Deflection)	88	87	155	154	153	74	73	125	125	124	85	84	143	143	142
16' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	82*	81*	145*	144*	143*	69*	68*	117*	116*	116*	79*	78*	134*	133*	133*
	D+L (Deflection)	82	81	145	144	143	69	68	117	116	116	79	78	134	133	133
	L (Deflection)	82	81	145	144	143	69	68	117	116	116	79	78	134	133	133
17' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	77*	76*	136*	135*	134*	64*	64*	110*	109*	108*					
	D+L (Deflection)	77	76	136	135	134	64	64	110	109	108					
	L (Deflection)	77	76	136	135	134	64	64	110	109	108					
18' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	72*	72*	128*	127*	126*	61*	60*	103*	102*	102*					
	D+L (Deflection)	72	72	128	127	126	61	60	103	102	102					
	L (Deflection)	72	72	128	127	126	61	60	103	102	102					
19' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	68*	67*	121*	120*	119*	57*	56*	97*	97*	96*					
	D+L (Deflection)	68	67	121	120	119	57	56	97	97	96					
	L (Deflection)	68	67	121	120	119	57	56	97	97	96					
20' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	64*	64*	114*	113*	113*	54*	53*	92*	91*	91*					
	D+L (Deflection)	64	64	114	113	113	54	53	92	91	91					
	L (Deflection)	64	64	114	113	113	54	53	92	91	91					
21' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	61*	60*	108*	108*	107*	51*	50*	87*	87*	86*					
	D+L (Deflection)	61	60	108	108	107	51	50	87	87	86					
	L (Deflection)	61	60	108	108	107	51	50	87	87	86					
22' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	58*	57*	103*	102*	102*	48*	48*	83*	82*	81*					
	D+L (Deflection)	58	57	102	102	102	48	48	83	82	81					
	L (Deflection)	58	57	102	102	102	48	48	83	82	81					
23' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	55*	54*	98*	97*	97*	46*	45*	79*	78*	78*					
	D+L (Deflection)	55	54	98	97	97	46	45	79	78	78					
	L (Deflection)	55	54	98	97	97	46	45	79	78	78					
24' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	53*	52*	94*	93*	92*	44*	43*	75*	75*	74*					
	D+L (Deflection)	53	52	94	93	92	44	43	75	75	74					
	L (Deflection)	53	52	94	93	92	44	43	75	75	74					
25' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	50*	49*	90*	89*	88*										
	D+L (Deflection)	49	49	90	89	88										
	L (Deflection)	49	49	90	89	88										
26' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	48*	47*	86*	85*	84*										
	D+L (Deflection)	43	46	86	85	84										
	L (Deflection)	43	46	86	85	84										
27' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	46*	45*	82*	82*	81*										
	D+L (Deflection)	38	40	82	82	81										
	L (Deflection)	38	40	82	82	81										
28' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	44*	43*	79*	79*	78*										
	D+L (Deflection)	34	35	79	79	78										
	L (Deflection)	34	35	79	79	78										

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 / )

- Wd** Weight of deck (uncoated), psf
- Ip** Moment of inertia for positive bending per foot of deck width, (in<sup>4</sup>)/ft
- In** Moment of inertia for negative bending per foot of deck width, (in<sup>4</sup>)/ft
- Sp** Section modulus for positive bending per foot of deck width, (in<sup>3</sup>)/ft
- Sn** Section modulus for negative bending per foot of deck width, (in<sup>3</sup>)/ft
- $\alpha_D, \alpha_L$  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:**

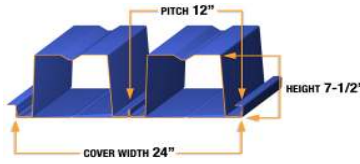
- Bending strength based on allowable flexural stress of 36 ksi.
- Loads marked with asterisk (\*) are governed by interior (6" bearing) or exterior (4" bearing) reactions (web crippling).
- Loads marked with two asterisks (\*\*) are governed by moment & shear or moment & reactions (web crippling) assuming 6" of interior bearing.
- 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	8.01	23.086	20.043	4.593	4.812	1896	2046	2182	3350	3580	3788	6637
16/16	8.62	24.652	22.090	4.567	4.952	1896	2046	2182	3350	3580	3788	6637
16/14	9.36	25.953	24.769	4.550	5.085	1896	2046	2182	3350	3580	3788	6637
14/16	10.04	28.967	25.772	6.347	6.071	2880	3100	3298	5019	5347	5644	12962
14/14	10.77	30.874	28.628	6.444	6.245	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)	162*	162*	161*	249*	248*	128*	127*	126*	193*	192*				
	D+L (Deflection)	134	143	151	169	180	128	127	126	193	192				
	L (Deflection)	95	101	107	119	127	128	127	126	193	192				
23' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	155*	154*	153*	238*	237*	122*	121*	120*	179**	181**				
	D+L (Deflection)	117	124	131	146	156	122	121	120	179	181				
	L (Deflection)	83	89	93	104	111	122	121	120	179	181				
24' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	148*	147*	146*	227*	227*	116**	115*	115*	166**	168**				
	D+L (Deflection)	102	108	114	128	136	116	115	115	166	168				
	L (Deflection)	73	78	82	92	98	116	115	115	166	168				
25' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	142*	141*	140*	218*	217*									
	D+L (Deflection)	89	95	100	112	119									
	L (Deflection)	65	69	73	81	86									
26' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	136*	135*	134*	209*	208*									
	D+L (Deflection)	78	83	88	98	105									
	L (Deflection)	57	61	65	72	77									
27' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	130*	130*	129*	196	199									
	D+L (Deflection)	69	74	77	87	92									
	L (Deflection)	51	55	58	64	69									
28' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	125*	125*	124*	182	184									
	D+L (Deflection)	61	65	68	77	82									
	L (Deflection)	46	49	52	58	62									
29' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	121*	120	118	169	170									
	D+L (Deflection)	54	58	61	68	72									
	L (Deflection)	41	44	47	52	55									
30' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	112	111	110	157	158									
	D+L (Deflection)	48	51	54	60	64									
	L (Deflection)	37	40	42	47	50									
31' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	105	103	102	146	147									
	D+L (Deflection)	43	46	48	54	57									
	L (Deflection)	34	36	38	43	45									
32' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	98	96	95	136	138									
	D+L (Deflection)	38	41	43	48	51									
	L (Deflection)	31	33	35	39	41									
33' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	91	90	89	127	129									
	D+L (Deflection)	34	36	38	43	46									
	L (Deflection)	28	30	32	35	38									
34' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	85	84	83	119	120									
	D+L (Deflection)	31	33	34	38	41									
	L (Deflection)	26	27	29	32	34									
35' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	80	79	77	112	113									
	D+L (Deflection)	27	29	30	34	37									
	L (Deflection)	24	25	26	30	32									

22' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	162*	← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	134	← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240)
	L (Deflection)	95	← 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, (in<sup>4</sup>)/ft  
**In** Moment of inertia for negative bending per foot of deck width, (in<sup>4</sup>)/ft  
**Sp** Section modulus for positive bending per foot of deck width, (in<sup>3</sup>)/ft  
**Sn** Section modulus for negative bending per foot of deck width, (in<sup>3</sup>)/ft  
 $\alpha_D, \alpha_L$  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.
  - 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.