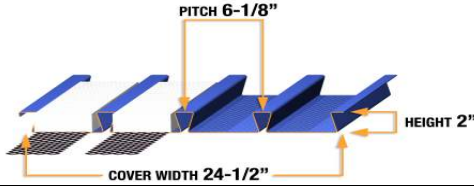


SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	Ip	In	Sp	Sn	Rbe			Rbi			Va
						2"	3"	4"	4"	5"	6"	
22	2.05	0.381	0.324	0.284	0.267	968	1115	1238	1832	1975	2105	3775
20	2.48	0.465	0.419	0.357	0.336	1378	1580	1750	2600	2797	2976	4559
18	3.28	0.620	0.597	0.477	0.463	2296	2615	2884	4317	4628	4908	5985
16	4.14	0.787	0.782	0.606	0.599	3500	3965	4357	6566	7017	7424	7481



LSD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LSD LOADS (psf)											
Span	Load Combinations	SINGLE SPAN				DOUBLE SPAN				TRIPLE SPAN			
		GAGE											
		22	20	18	16	22	20	18	16	22	20	18	16
8' - 6"	α _D D+α _L L (Strength)	92	115	154	196	82**	108**	148**	192**	102**	135**	186**	240**
	D+L (Deflection)	39	47	63	80	82	108	148	192	75	91	122	154
	L (Deflection)	27	33	44	56	65	79	105	133	51	62	83	106
9' - 0"	α _D D+α _L L (Strength)	82	103	137	174	73**	96**	132**	171**	92**	120**	165**	214**
	D+L (Deflection)	32	39	53	67	73	96	129	164	63	76	102	129
	L (Deflection)	23	28	37	47	54	66	88	112	43	53	70	89
9' - 6"	α _D D+α _L L (Strength)	73	92	123	156	66**	86**	118**	153**	83**	108**	148**	192**
	D+L (Deflection)	27	33	44	56	66	82	110	139	53	65	86	109
	L (Deflection)	19	24	32	40	46	56	75	95	37	45	60	76
10' - 0"	α _D D+α _L L (Strength)	66	82	110	140	60**	77**	106**	138**	75**	97**	134**	173**
	D+L (Deflection)	23	28	37	48	57	70	93	119	45	55	73	93
	L (Deflection)	17	20	27	34	40	48	64	82	31	38	51	65
10' - 6"	α _D D+α _L L (Strength)	59	75	100	127	54**	70**	96**	124**	68**	88**	121**	156**
	D+L (Deflection)	20	24	32	40	49	60	80	102	39	47	63	80
	L (Deflection)	14	18	23	30	34	42	56	71	27	33	44	56
11' - 0"	α _D D+α _L L (Strength)	54	68	90	115	49**	63**	87**	113**	62**	80**	110**	142**
	D+L (Deflection)	17	20	27	35	43	52	69	88	33	41	54	69
	L (Deflection)	13	15	20	26	30	36	48	61	24	29	38	49
11' - 6"	α _D D+α _L L (Strength)	49	62	82	105	45**	58**	80**	103**	57**	73**	100**	130**
	D+L (Deflection)	14	18	23	30	37	45	60	77	29	35	47	60
	L (Deflection)	11	13	18	23	26	32	42	54	21	25	34	43
12' - 0"	α _D D+α _L L (Strength)	45	56	75	96	41**	53**	73**	94**	52**	67**	92**	119**
	D+L (Deflection)	12	15	20	26	32	39	53	67	25	31	41	52
	L (Deflection)	10	12	16	20	23	28	37	47	18	22	30	38
12' - 6"	α _D D+α _L L (Strength)	41	52	69	88	38**	48**	67**	86**	48**	61**	84**	109**
	D+L (Deflection)	11	13	18	22	28	35	46	59	22	27	36	46
	L (Deflection)	9	10	14	18	20	25	33	42	16	20	26	33
13' - 0"	α _D D+α _L L (Strength)	38	48	64	81	35**	45**	61**	80**	44**	56**	78**	101**
	D+L (Deflection)	9	11	15	19	25	31	41	52	19	24	32	40
	L (Deflection)	8	9	12	16	18	22	29	37	14	17	23	30
13' - 6"	α _D D+α _L L (Strength)	35	44	59	75	32**	41**	57**	73**	41**	52**	72**	93**
	D+L (Deflection)	8	10	13	17	22	27	36	46	17	21	28	35
	L (Deflection)	7	8	11	14	16	20	26	33	13	16	21	26
14' - 0"	α _D D+α _L L (Strength)	32	41	54	69	30**	38**	52**	68**	38**	48**	66**	86**
	D+L (Deflection)	7	9	12	15	20	24	32	41	15	18	25	31
	L (Deflection)	6	7	10	13	14	18	24	30	11	14	19	24
14' - 6"	α _D D+α _L L (Strength)	30	38	50	64	27**	35**	49**	63**	35**	45**	62**	80**
	D+L (Deflection)	6	8	10	13	17	21	28	36	13	16	22	28
	L (Deflection)	5	7	9	11	13	16	21	27	10	13	17	21
15' - 0"	α _D D+α _L L (Strength)	28	35	47	60	25**	33**	45**	59**	33**	42**	57**	74**
	D+L (Deflection)	5	7	9	11	16	19	25	32	12	15	19	25
	L (Deflection)	5	6	8	10	12	14	19	24	9	11	15	19

8' - 6"	α _D D+α _L L (Strength)	92	← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	39	← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240)
	L (Deflection)	27	← 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, plf |
| 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, plf |
| In | Moment of inertia for negative bending per foot of deck width, (in ⁴)/ft | Va | Allowable shear value per foot of deck width, plf |
| 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 reactions (web crippling) assuming 4" of interior bearing.
 - Loads marked with two asterisks (**) are governed by moment & shear or moment & reactions (web crippling) assuming 4" 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*.