



SECTION PROPERTIES (Per Foot of Width)

Base Steel Thickness (in.)	GAGE	Yield Stress (ksi)	Weight G90 (psf)	Sec. Modulus		Deflection Moment of Inertia L_{sd} (in ⁴)	Web Crippling Loads		Web Crippling Data			
				S_{pos} (in ³)	S_{neg} (in ³)		N = 1.5" P_e (lb)	N = 3" P_i (lb)	P_{e1} End (lb)	P_{e2} End (lb)	P_{i1} Interior (lb)	P_{i2} Interior (lb)
0.0239	24	33	1.36	0.142	0.138	0.144	360	624	121	30.2	215	36.5
0.0295	22	33	1.66	0.185	0.173	0.177	530	933	191	47.6	344	58.5
0.0358	20	33	2.01	0.225	0.214	0.214	757	1347	289	72.3	527	89.6

ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)

Span Length (ft.)	MAX CO. CANTILEVER SPAN (ft.-in.)	5.0		5.5		6.0		6.5		7.0		7.5		8.0		8.5		9.0		9.5		10.0		
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	
1- SPAN Bas Steel Thickness (in.)	24	4' 8"	75	75	62	57	52	44	44	34	38	27	33	22	29	18	26	15	23	13	21	11	19	9
	22	6' 1"	98	93	81	70	68	54	58	42	50	34	43	27	38	23	34	19	30	16	27	14	24	12
	20	7' 5"	119	112	98	84	82	65	70	51	61	41	53	33	46	27	41	23	37	19	33	16	30	14
2- SPAN Bas Steel Thickness (in.)	24	5' 9"	73	179	60	135	50	104	43	82	37	65	32	53	28	44	25	37	22	31	20	26	18	22
	22	7' 6"	91	221	76	166	63	128	54	101	47	81	41	65	36	54	32	45	28	38	25	32	23	28
	20	9' 1"	113	267	93	201	78	155	67	122	58	97	50	79	44	65	39	54	35	46	31	39	28	33
3- SPAN Bas Steel Thickness (in.)	24	5' 10"	91	142	75	107	63	82	54	65	46	52	40	42	35	35	31	29	28	24	25	21	23	18
	22	7' 7"	114	175	94	132	79	101	68	80	58	64	51	52	45	43	40	36	35	30	32	26	29	22
	20	9' 3"	141	212	116	159	98	123	83	96	72	77	63	63	55	52	49	43	43	36	39	31	35	26

Notes:

- 1 Based on ASTM A 653 structural steel.
- 2 Values in row "S" are based on strength.
- 3 Values in row "D" are based on deflection of SPAN LENGTH/240.
- 4 P_e = Allowable end web crippling load based on N = 1.5 in.
- 5 P_i = Allowable interior web crippling load based on N = 3.0 in.
- 6 Web crippling not included in strength calculations. See Example.
- 7 If bearing lengths are less than specified, see Example for use of web crippling data.
- 8 MAX CO. SPAN = Maximum construction span based on 200 lb concentrated load per foot of deck (ANSI/SDI RD-2017).
- 9 CANTIL. SPAN = Maximum construction cantilever span based on Eq. 2.4.3 of (ANSI/SDI RD-2017).
- 10 Allowable Strength Design (ASD) principles were used in accordance with AISI S100-16.

Prepared by Dr. R.M. Schuster, P.E., Distinguished Professor Emeritus, University of Waterloo.

GAGE	CANTILEVER SPAN
24	1' 1"
22	1' 4"
20	1' 8"