

ALLOWABLE AXIAL LOADS

Notes:

1. Allowable loads based on weak axis and torsional horizontal mechanical bracing at 48" o.c. maximum for axial load calculations and continuous support of each flange for flexural calculation.
2. Allowable axial load in in kips/stud (1 kip = 1000 lbs).
3. Allowable Axial load for the 20 and 18 gauge studs are based on steel with $F_y = 33$ ksi. The allowable axial load for the 16 gauge studs are based on steel with $F_y = 50$ ksi.
4. Check lateral end reactions for web crippling.
5. The allowable loads do not include the effects of the gypsum board.
6. Deflections due to lateral loads do not exceed $L/720$ unless as noted by the following superscripts:
 - 1 - Deflection exceeds $L/720$
 - 2 - Deflection exceeds $L/600$
 - 3 - Deflection exceeds $L/360$
 - 4 - Deflection exceeds $L/240$
 - 5 - Deflection exceeds $L/120$

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 5 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		Spacing			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	1.85	1.77	1.63	1.71	1.62	1.44	1.56	1.45	1.24	1.40	1.27	1.04
3-5/8	18	1-5/8	1/2	33 ksi	2.61	2.53	2.39	2.45	2.35	2.16	2.26	2.14	1.92	2.06	1.92	1.67
3-5/8	16	1-5/8	1/2	50 ksi	3.46	3.38	3.22	3.25	3.14	2.95	3.00	2.88	2.64	2.74	2.60	2.33
4	20	1-5/8	1/2	33 ksi	2.01	1.94	1.80	1.89	1.80	1.63	1.75	1.65	1.44	1.60	1.48	1.25
4	18	1-5/8	1/2	33 ksi	2.84	2.76	2.63	2.69	2.60	2.43	2.53	2.42	2.21	2.35	2.22	1.97
4	16	1-5/8	1/2	50 ksi	4.53	4.47	4.34	4.29	4.20	4.04	4.00	3.90	3.70	3.69	3.57	3.34
6	20	1-5/8	1/2	33 ksi	2.44	2.40	2.32	2.40	2.35	2.25	2.35	2.29	2.17	2.28	2.21	2.06
6	18	1-5/8	1/2	33 ksi	3.41	3.38	3.31	3.38	3.34	3.25	3.35	3.29	3.18	3.27	3.20	3.07
6	16	1-5/8	1/2	50 ksi	5.62	5.59	5.52	5.59	5.54	5.46	5.55	5.49	5.38	5.49	5.42	5.28
8	20	1-5/8	1/2	33 ksi	2.40	2.37	2.31	2.37	2.34	2.26	2.35	2.30	2.20	2.31	2.26	2.14
8	18	1-5/8	1/2	33 ksi	3.36	3.33	3.27	3.33	3.30	3.22	3.31	3.26	3.17	3.27	3.22	3.11
8	16	1-5/8	1/2	50 ksi	5.44	5.41	5.36	5.42	5.38	5.32	5.39	5.35	5.27	5.36	5.31	5.21

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		Spacing			Spacing			Spacing			Spacing		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	1.24	1.10	0.852	0.921	0.772	0.513	0.642	0.503	0.244	0.443	0.294	0.055
3-5/8	18	1-5/8	1/2	33 ksi	1.84	1.70	1.431	1.42	1.261	0.972	1.052	0.893	0.613	0.752	0.603	0.334
3-5/8	16	1-5/8	1/2	50 ksi	2.46	2.30	2.01	1.92	1.74	1.432	1.431	1.262	0.953	1.232	1.103	0.874
4	20	1-5/8	1/2	33 ksi	1.45	1.31	1.851	1.13	0.972	0.692	0.832	0.672	0.383	0.592	0.433	0.154
4	18	1-5/8	1/2	33 ksi	2.15	2.00	1.72	1.73	1.56	1.252	1.341	1.162	0.843	1.422	1.222	0.883
4	16	1-5/8	1/2	50 ksi	3.35	3.21	2.96	2.67	2.52	2.231	2.10	1.931	1.652	1.622	1.462	1.193
6	20	1-5/8	1/2	33 ksi	2.21	2.12	1.94	2.02	1.89	1.66	1.79	1.64	1.351	1.53	1.36	1.042
6	18	1-5/8	1/2	33 ksi	3.19	3.10	2.94	2.97	2.86	2.63	2.7	2.55	2.28	4.04	3.87	3.55
6	16	1-5/8	1/2	50 ksi	5.34	5.25	5.08	4.95	4.83	4.60	4.45	4.30	4.02	3.89	3.72	3.39
8	20	1-5/8	1/2	33 ksi	2.28	2.21	2.07	2.19	2.10	1.91	2.09	1.97	1.72	1.97	1.81	1.50
8	18	1-5/8	1/2	33 ksi	3.24	3.17	3.04	3.16	3.06	2.88	3.06	2.93	2.68	2.93	2.77	2.46
8	16	1-5/8	1/2	50 ksi	5.33	5.27	5.15	5.25	5.16	4.99	5.15	5.03	4.80	5.03	4.87	4.57

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 15 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	1.42	1.22	0.842	1.19	0.952	0.522	0.962	0.692	0.223	0.732	0.453	0.004
3-5/8	18	1-5/8	1/2	33 ksi	2.17	1.96	1.57	1.90	1.65	1.192	1.62	1.342	0.833	1.342	1.032	0.493
3-5/8	16	1-5/8	1/2	50 ksi	3.66	3.47	3.11	3.28	3.05	2.621	2.88	2.621	2.142	2.451	2.182	1.683
4	20	1-5/8	1/2	33 ksi	1.60	1.40	1.041	1.38	1.15	0.722	1.16	0.892	0.412	0.932	0.642	0.123
4	18	1-5/8	1/2	33 ksi	2.42	2.22	1.84	2.17	1.93	1.481	1.91	1.621	1.112	1.631	1.322	0.753
4	16	1-5/8	1/2	50 ksi	4.15	3.96	3.61	3.80	3.57	3.14	3.42	3.15	2.662	3.02	2.721	2.182
6	20	1-5/8	1/2	33 ksi	2.2	2.09	1.87	2.11	1.96	1.68	1.98	1.81	1.46	1.84	1.63	1.221
6	18	1-5/8	1/2	33 ksi	3.19	3.08	2.86	3.09	2.95	2.68	2.98	2.81	2.47	2.83	2.62	2.22
6	16	1-5/8	1/2	50 ksi	5.42	5.32	5.12	5.32	5.19	4.94	5.21	5.05	4.73	5.07	4.87	4.47
8	20	1-5/8	1/2	33 ksi	2.22	2.13	1.96	2.15	2.04	1.81	2.07	1.93	1.65	1.97	1.80	1.47
8	18	1-5/8	1/2	33 ksi	3.19	3.10	2.93	3.11	3.01	2.79	3.03	2.90	2.63	2.94	2.78	2.45
8	16	1-5/8	1/2	50 ksi	5.29	5.21	5.06	5.22	5.12	4.93	5.15	5.03	4.78	5.06	4.91	4.62

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.523	0.233	0.004	0.174	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005
3-5/8	18	1-5/8	1/2	33 ksi	1.072	0.753	0.204	0.604	0.284	0.004	0.254	0.004	0.005	0.004	0.005	0.005
3-5/8	16	1-5/8	1/2	50 ksi	2.062	1.772	1.273	1.403	1.123	0.624	0.924	0.654	0.185	0.574	0.325	0.005
4	20	1-5/8	1/2	33 ksi	0.712	0.403	0.004	0.323	0.194	0.004	0.024	0.004	0.005	0.004	0.005	0.005
4	18	1-5/8	1/2	33 ksi	1.352	1.022	0.423	0.853	0.493	0.004	0.444	0.094	0.005	0.134	0.004	0.005
4	16	1-5/8	1/2	50 ksi	2.611	2.292	1.733	1.862	1.543	0.964	1.283	0.964	0.414	0.844	0.544	0.035
6	20	1-5/8	1/2	33 ksi	1.68	1.43	0.972	1.331	1.022	0.452	0.972	0.613	0.004	0.623	0.243	0.004
6	18	1-5/8	1/2	33 ksi	2.66	2.41	1.94	2.27	1.951	1.362	1.832	1.462	0.793	1.402	0.993	0.284
6	16	1-5/8	1/2	50 ksi	4.84	4.59	4.13	4.27	3.96	3.372	3.62	3.252	2.582	2.952	2.552	1.833
8	20	1-5/8	1/2	33 ksi	1.87	1.67	1.28	1.64	1.37	0.851	1.37	1.031	0.392	1.071	0.662	0.003
8	18	1-5/8	1/2	33 ksi	2.84	2.64	2.26	2.61	2.34	1.82	2.33	1.99	1.332	2.33	1.99	1.332
8	16	1-5/8	1/2	50 ksi	4.97	4.79	4.43	4.74	4.49	4.01	4.46	4.13	3.511	4.13	3.74	2.952

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 20 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	1.22	0.961	0.492	0.952	0.662	0.133	0.692	0.373	0.004	0.453	0.113	0.004
3-5/8	18	1-5/8	1/2	33 ksi	1.96	1.7	1.202	1.65	1.342	0.772	1.342	0.992	0.373	1.032	0.663	0.024
3-5/8	16	1-5/8	1/2	50 ksi	3.47	3.23	2.761	3.05	2.761	2.232	2.621	2.292	1.713	2.182	1.842	1.233
4	20	1-5/8	1/2	33 ksi	1.40	1.16	0.692	1.15	0.862	0.322	0.892	0.562	0.003	0.642	0.283	0.004
4	18	1-5/8	1/2	33 ksi	2.22	1.97	1.481	1.93	1.62	1.052	1.621	1.272	0.633	1.322	0.932	0.253
4	16	1-5/8	1/2	50 ksi	3.96	3.72	3.26	3.57	3.28	2.732	3.15	2.821	2.202	2.721	2.351	1.693
6	20	1-5/8	1/2	33 ksi	2.09	1.94	1.64	1.96	1.77	1.40	1.81	1.57	1.121	1.63	1.35	0.832
6	18	1-5/8	1/2	33 ksi	3.08	2.93	2.65	2.95	2.77	2.41	2.81	2.58	2.14	2.62	2.35	1.831
6	16	1-5/8	1/2	50 ksi	5.32	5.18	4.92	5.19	5.02	4.68	5.05	4.83	4.41	4.87	4.60	4.09
8	20	1-5/8	1/2	33 ksi	2.13	2.02	1.78	2.04	1.89	1.59	1.93	1.74	1.38	1.80	1.58	1.15
8	18	1-5/8	1/2	33 ksi	3.10	2.99	2.76	3.01	2.86	2.58	2.90	2.72	2.37	2.78	2.56	2.13
8	16	1-5/8	1/2	50 ksi	5.21	5.11	4.91	5.12	4.99	4.74	5.03	4.86	4.55	4.91	4.72	4.33

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.233	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	18	1-5/8	1/2	33 ksi	0.753	0.373	0.004	0.284	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005
3-5/8	16	1-5/8	1/2	50 ksi	1.772	1.423	0.824	1.123	0.784	0.204	0.654	0.334	0.005	0.325	0.025	0.005
4	20	1-5/8	1/2	33 ksi	0.403	0.034	0.004	0.004	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005
4	18	1-5/8	1/2	33 ksi	1.022	0.613	0.004	0.493	0.074	0.004	0.094	0.004	0.005	0.004	0.005	0.005
4	16	1-5/8	1/2	50 ksi	2.292	1.912	1.233	1.543	1.144	0.474	0.964	0.594	0.005	0.544	0.195	0.005
6	20	1-5/8	1/2	33 ksi	1.43	1.121	0.532	1.022	0.642	0.003	0.613	0.184	0.004	0.243	0.004	0.004
6	18	1-5/8	1/2	33 ksi	2.41	2.10	1.501	1.951	1.552	0.823	1.463	1.014	0.194	0.993	0.054	0.004
6	16	1-5/8	1/2	50 ksi	4.59	4.28	3.691	3.96	3.561	2.822	3.252	2.792	1.973	2.552	2.063	1.214
8	20	1-5/8	1/2	33 ksi	1.67	1.41	0.95	1.37	1.02	0.362	1.031	0.602	0.003	0.662	0.163	0.004
8	18	1-5/8	1/2	33 ksi	2.64	2.39	1.88	2.34	1.99	1.321	1.99	1.551	0.722	1.591	1.072	0.093
8	16	1-5/8	1/2	50 ksi	4.79	4.55	4.09	4.49	4.17	3.54	4.13	3.71	2.912	3.72	3.202	2.232

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 25 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	1.021	0.722	0.163	0.732	0.393	0.003	0.453	0.823	0.004	0.193	0.004	0.004
3-5/8	18	1-5/8	1/2	33 ksi	1.76	1.441	0.852	1.421	1.052	0.383	1.082	0.673	0.004	0.753	0.333	0.004
3-5/8	16	1-5/8	1/2	50 ksi	3.29	2.99	2.432	2.83	2.492	1.862	2.372	1.992	1.313	1.922	1.523	0.834
4	20	1-5/8	1/2	33 ksi	1.22	0.921	0.692	0.932	0.582	0.003	0.642	0.263	0.004	0.373	0.373	0.004
4	18	1-5/8	1/2	33 ksi	2.03	1.72	1.132	1.70	1.332	0.652	1.362	0.952	0.203	1.022	0.583	0.004
4	16	1-5/8	1/2	50 ksi	3.78	3.49	2.931	3.35	3.001	2.352	2.901	2.502	1.783	2.442	2.012	1.243
6	20	1-5/8	1/2	33 ksi	1.98	1.79	1.42	1.82	1.58	1.13	1.63	1.35	0.802	1.42	1.091	0.452
6	18	1-5/8	1/2	33 ksi	2.97	2.79	2.44	2.81	2.59	2.14	2.64	2.36	1.81	2.42	2.08	1.452
6	16	1-5/8	1/2	50 ksi	5.22	5.05	4.72	5.06	4.85	4.43	4.89	4.62	4.10	4.67	4.34	3.721
8	20	1-5/8	1/2	33 ksi	2.05	1.90	1.61	1.93	1.74	1.38	1.79	1.56	1.12	1.64	1.37	0.83
8	18	1-5/8	1/2	33 ksi	3.02	2.87	2.59	2.90	2.72	2.36	2.76	2.54	2.10	2.62	2.35	1.82
8	16	1-5/8	1/2	50 ksi	5.13	5.01	4.76	5.03	4.87	4.55	4.90	4.70	4.31	4.77	4.52	4.04

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	18	1-5/8	1/2	33 ksi	0.463	0.034	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	16	1-5/8	1/2	50 ksi	1.513	1.114	0.424	0.864	0.474	0.005	0.414	0.055	0.005	0.095	0.005	0.005
4	20	1-5/8	1/2	33 ksi	0.123	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	18	1-5/8	1/2	33 ksi	0.713	0.243	0.004	0.174	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005
4	16	1-5/8	1/2	50 ksi	2.002	1.553	0.774	1.243	0.794	0.024	0.674	0.254	0.005	0.275	0.005	0.005
6	20	1-5/8	1/2	33 ksi	1.201	0.822	0.113	0.732	0.283	0.004	0.283	0.004	0.004	0.004	0.004	0.005
6	18	1-5/8	1/2	33 ksi	2.17	1.791	1.072	1.652	1.182	0.323	1.123	0.583	0.004	0.623	0.064	0.004
6	16	1-5/8	1/2	50 ksi	4.36	3.98	3.262	3.661	3.182	2.313	2.902	2.373	1.414	2.183	1.624	0.644
8	20	1-5/8	1/2	33 ksi	1.47	1.15	0.531	1.11	0.692	0.002	0.702	0.702	0.003	0.282	0.003	0.004
8	18	1-5/8	1/2	33 ksi	2.45	2.13	1.51	2.08	1.65	0.842	1.651	1.122	0.133	1.202	0.572	0.003
8	16	1-5/8	1/2	50 ksi	4.61	4.32	3.75	4.25	3.85	3.081	3.82	3.301	2.342	3.321	2.702	1.563

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 30 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.842	0.492	0.003	0.522	0.133	0.004	0.223	0.004	0.004	0.004	0.004	0.005
3-5/8	18	1-5/8	1/2	33 ksi	1.57	1.202	0.512	1.192	0.772	0.013	0.832	0.373	0.004	0.493	0.024	0.004
3-5/8	16	1-5/8	1/2	50 ksi	3.11	2.761	2.122	2.621	2.232	1.503	2.142	1.713	0.944	1.683	1.233	0.454
4	20	1-5/8	1/2	33 ksi	1.041	0.692	0.043	0.322	0.322	0.003	0.412	0.003	0.004	0.123	0.004	0.004
4	18	1-5/8	1/2	33 ksi	1.84	1.481	0.802	1.481	1.052	0.283	1.112	0.633	0.004	0.753	0.253	0.004
4	16	1-5/8	1/2	50 ksi	3.61	3.26	2.612	3.14	2.732	1.982	2.662	2.202	1.383	2.182	1.693	0.834
6	20	1-5/8	1/2	33 ksi	1.87	1.64	1.21	1.68	1.40	0.861	1.46	1.12	0.482	1.221	0.832	0.103
6	18	1-5/8	1/2	33 ksi	2.86	2.65	2.23	2.68	2.41	1.88	2.47	2.14	1.501	2.22	1.831	1.092
6	16	1-5/8	1/2	50 ksi	5.12	4.952	4.53	4.94	4.68	4.18	4.73	4.41	3.80	4.47	4.09	3.362
8	20	1-5/8	1/2	33 ksi	1.96	1.78	1.44	1.81	1.59	1.16	1.65	1.38	0.85	1.47	1.15	0.521
8	18	1-5/8	1/2	33 ksi	2.93	2.76	2.43	2.79	2.58	2.15	2.63	2.37	1.85	2.45	2.13	1.51
8	16	1-5/8	1/2	50 ksi	5.06	4.91	4.61	4.93	4.74	4.36	4.78	4.55	4.07	4.62	4.33	3.76

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	18	1-5/8	1/2	33 ksi	0.204	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	16	1-5/8	1/2	50 ksi	1.273	0.824	0.054	0.624	0.204	0.005	0.185	0.005	0.005	0.005	0.005	0.005
4	20	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	18	1-5/8	1/2	33 ksi	0.423	0.004	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	16	1-5/8	1/2	50 ksi	1.733	1.233	0.354	0.964	0.474	0.005	0.414	0.005	0.005	0.035	0.005	0.005
6	20	1-5/8	1/2	33 ksi	0.972	0.532	0.003	0.453	0.003	0.004	0.004	0.004	0.005	0.004	0.004	0.005
6	18	1-5/8	1/2	33 ksi	1.94	1.502	0.663	1.362	0.823	0.004	0.793	0.194	0.004	0.284	0.004	0.005
6	16	1-5/8	1/2	50 ksi	4.13	3.691	2.852	3.372	2.822	1.833	2.582	1.973	0.894	1.833	1.214	0.114
8	20	1-5/8	1/2	33 ksi	1.28	0.90	0.172	0.851	0.362	0.003	0.392	0.003	0.004	0.003	0.003	0.004
8	18	1-5/8	1/2	33 ksi	2.26	1.88	1.151	1.82	1.321	0.382	1.332	0.722	0.003	0.813	0.093	0.004
8	16	1-5/8	1/2	50 ksi	4.43	4.09	3.41	4.01	3.54	2.642	3.511	2.912	1.793	2.952	2.232	0.924

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 35 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.662	0.262	0.003	0.323	0.003	0.004	0.013	0.004	0.004	0.004	0.004	0.005
3-5/8	18	1-5/8	1/2	33 ksi	1.381	0.962	0.203	0.982	0.513	0.004	0.593	0.094	0.004	0.252	0.004	0.004
3-5/8	16	1-5/8	1/2	50 ksi	2.93	2.542	1.822	2.422	1.982	1.174	1.922	1.443	0.594	1.453	0.964	0.104
4	20	1-5/8	1/2	33 ksi	0.861	0.472	0.003	0.512	0.073	0.004	0.183	0.004	0.004	0.004	0.004	0.005
4	18	1-5/8	1/2	33 ksi	1.66	1.242	0.482	1.262	0.782	0.003	0.872	0.343	0.004	0.493	0.004	0.004
4	16	1-5/8	1/2	50 ksi	3.43	3.04	2.302	2.931	2.482	1.633	2.422	1.922	1.003	1.932	1.393	0.444
6	20	1-5/8	1/2	33 ksi	1.75	1.50	1.00	1.54	1.22	0.602	1.29	0.911	0.182	1.021	0.582	0.003
6	18	1-5/8	1/2	33 ksi	2.76	2.51	2.02	2.54	2.23	1.63	2.30	1.92	1.192	2.02	1.572	0.732
6	16	1-5/8	1/2	50 ksi	5.02	4.79	4.33	4.81	4.51	3.94	4.57	4.20	3.501	4.28	3.84	3.012
8	20	1-5/8	1/2	33 ksi	1.87	1.67	1.27	1.70	1.45	0.95	1.52	1.20	0.59	1.31	0.94	0.222
8	18	1-5/8	1/2	33 ksi	2.85	2.65	2.26	2.68	2.43	1.94	2.50	2.19	1.59	2.29	1.92	1.21
8	16	1-5/8	1/2	50 ksi	4.98	4.81	4.46	4.83	4.61	4.17	4.66	4.39	3.84	4.47	4.14	3.47

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	18	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	16	1-5/8	1/2	50 ksi	1.044	0.554	0.005	0.404	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	20	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	18	1-5/8	1/2	33 ksi	0.154	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	16	1-5/8	1/2	50 ksi	1.473	0.924	0.004	0.714	0.174	0.005	0.174	0.005	0.005	0.005	0.005	0.005
6	20	1-5/8	1/2	33 ksi	0.742	0.253	0.004	0.193	0.004	0.004	0.004	0.004	0.005	0.004	0.005	0.005
6	18	1-5/8	1/2	33 ksi	1.721	1.212	0.273	1.092	0.483	0.004	0.484	0.004	0.004	0.004	0.004	0.005
6	16	1-5/8	1/2	50 ksi	3.91	3.402	2.462	3.092	2.483	1.373	2.263	1.594	0.414	1.514	0.824	0.005
8	20	1-5/8	1/2	33 ksi	1.09	0.651	0.002	0.602	0.042	0.003	0.092	0.003	0.004	0.003	0.004	0.004
8	18	1-5/8	1/2	33 ksi	2.07	1.64	0.802	1.57	1.002	0.002	1.022	0.332	0.003	0.453	0.003	0.004
8	16	1-5/8	1/2	50 ksi	4.26	3.86	3.08	3.77	3.231	2.202	3.201	2.522	1.273	2.582	1.783	0.324

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120

ALLOWABLE AXIAL LOADS (Cont.)

LATERAL LOAD = 40 PSF

					WALL HEIGHT - 8 FT			WALL HEIGHT - 9 FT			WALL HEIGHT - 10 FT			WALL HEIGHT - 11 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.492	0.053	0.004	0.133	0.004	0.004	0.044	0.004	0.005	0.004	0.004	0.005
3-5/8	18	1-5/8	1/2	33 ksi	1.202	0.732	0.003	0.382	0.253	0.004	0.373	0.004	0.004	0.024	0.004	0.005
3-5/8	16	1-5/8	1/2	50 ksi	2.761	2.332	1.523	2.232	1.743	0.854	1.713	1.193	0.264	1.233	0.704	0.004
4	20	1-5/8	1/2	33 ksi	0.692	0.252	0.004	0.322	0.003	0.004	0.003	0.004	0.004	0.004	0.004	0.005
4	18	1-5/8	1/2	33 ksi	1.481	1.022	0.173	1.052	0.532	0.003	0.633	0.063	0.004	0.253	0.004	0.004
4	16	1-5/8	1/2	50 ksi	3.26	2.821	2.012	2.732	2.232	1.303	2.202	1.643	0.644	1.693	1.103	0.074
6	20	1-5/8	1/2	33 ksi	1.64	1.35	0.791	1.40	1.04	0.342	1.121	0.692	0.003	0.832	0.332	0.003
6	18	1-5/8	1/2	33 ksi	2.65	2.37	1.82	2.41	2.06	1.371	2.14	1.711	0.892	1.831	1.332	0.393
6	16	1-5/8	1/2	50 ksi	4.92	4.66	4.14	4.68	4.35	3.70	4.41	4.00	3.202	4.09	3.601	2.672
8	20	1-5/8	1/2	33 ksi	1.78	1.55	1.10	1.59	1.30	0.73	1.38	1.03	0.341	1.15	0.73	0.002
8	18	1-5/8	1/2	33 ksi	2.76	2.54	2.09	2.58	2.29	1.73	2.37	2.02	1.33	2.13	1.72	0.901
8	16	1-5/8	1/2	50 ksi	4.91	4.71	4.31	4.74	4.48	3.98	4.55	4.23	3.61	4.33	3.95	3.20

					WALL HEIGHT - 12 FT			WALL HEIGHT - 14 FT			WALL HEIGHT - 16 FT			WALL HEIGHT - 18 FT		
Web (in)	Gauge	Flange (in)	Lip (in)		SPACING			SPACING			SPACING			SPACING		
					12"	16"	24"	12"	16"	24"	12"	16"	24"	12"	16"	24"
3-5/8	20	1-5/8	1/2	33 ksi	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	18	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
3-5/8	16	1-5/8	1/2	50 ksi	0.824	0.294	0.005	0.204	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	20	1-5/8	1/2	33 ksi	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	18	1-5/8	1/2	33 ksi	0.004	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	16	1-5/8	1/2	50 ksi	1.233	0.624	0.004	0.474	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
6	20	1-5/8	1/2	33 ksi	0.532	0.003	0.004	0.003	0.004	0.004	0.004	0.004	0.005	0.004	0.005	0.005
6	18	1-5/8	1/2	33 ksi	1.502	0.932	0.003	0.823	0.163	0.004	0.194	0.004	0.005	0.004	0.005	0.005
6	16	1-5/8	1/2	50 ksi	3.691	3.122	2.083	2.822	2.153	0.944	1.973	1.244	0.004	1.214	0.464	0.005
8	20	1-5/8	1/2	33 ksi	0.90	0.412	0.002	0.362	0.002	0.003	0.003	0.003	0.004	0.004	0.004	0.005
8	18	1-5/8	1/2	33 ksi	1.88	1.39	0.452	1.321	0.692	0.003	0.722	0.003	0.004	0.093	0.004	0.004
8	16	1-5/8	1/2	50 ksi	4.09	3.63	2.751	3.54	2.931	1.782	2.912	2.152	0.763	2.2392	1.343	0.004

1 - Deflection exceeds L/720
 2 - Deflection exceeds L/600
 3 - Deflection exceeds L/360

4 - Deflection exceeds L/240
 5 - Deflection exceeds L/120