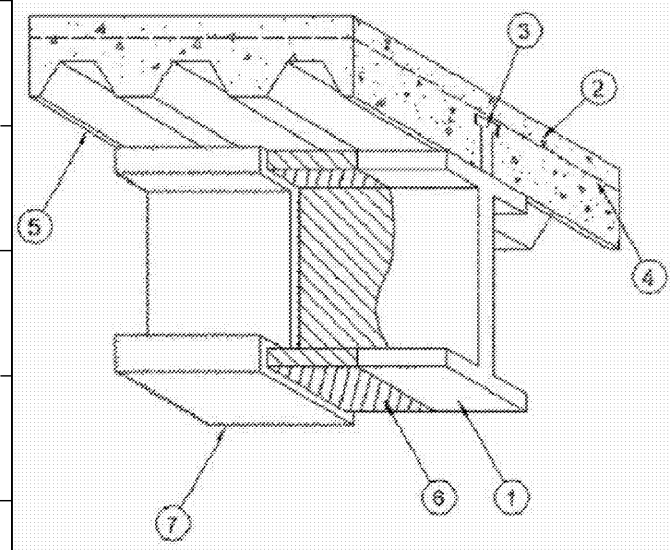


Restrained Beam Rating — 1, 1-1/2, 2, 2-1/2, 3, 3-1/2 and 4 Hr (See Item 7)  
Unrestrained Beam Rating — 1, 1-1/2, 2, 2-1/2 and 3 Hr (See Item 7)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide HYPERLINK "http://productspec.ul.com/document.php?id=BXUV.Guideline%20BXUV or HYPERLINK "http://productspec.ul.com/canada/document.php?id=BXUV7.Guideline%20BXUV7"

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



- Steel Beam** — Min size as shown in the table below (See Item 7).
- Normal Weight or Lightweight Concrete** — Compressive strength 3500 psi. For normal weight concrete either carbonate or siliceous aggregate may be used. Unit weight 148 lbs/cu ft for normal weight concrete and 110 lbs/cu ft for lightweight concrete.
- Shear Connectors** — (Optional) Studs, headed type or equivalent per AISC specifications welded to the top flange of beam through the steel floor units.
- Welded Wire Fabric** — 6x6 SWG.
- Steel Floor Units** — 1-1/2, 2 or 3 in. deep galvanized composite fluted units, welded to beam.
- Primer Coating** — 60 micron (2 mil) thickness of a two component epoxy primer or 60 micron (2 mil) thickness of an alkyd primer or 60 micron (2 mil) thickness of an acrylic primer or 60 micron (2 mil) thickness of a polyurethane primer.
- Mastic and Intumescent Coating** — Coating spray or brush applied in accordance with the manufacturer's instructions at the minimum average dry thickness shown in the table below. Flutes above beam to be completely filled with mineral wool insulation having a minimum density of 6 lbs/cu ft. The thickness shown in the table below does not include the primer thickness.
- Top Coat (not shown)** — The following topcoats shall be used for compliance with Exterior Environmental Exposure requirement. Solvent Based 2 pack topcoat Type Hensotop 2K PU applied at a dry film thickness of 100 microns (4 mil) or Acrylic polyurethane topcoat Type HI Solids Polyurethane 250 applied at a dry film thickness of 100 microns (4 mil).

**UNRESTRAINED BEAM RATINGS**

Hp/A	1 Hr., MM	1-1/2 Hr., MM	2 Hr., MM	2-1/2 Hr., MM	3 Hr., MM
253	2.20	3.02	5.72	8.42	—
253	2.20	3.01	5.70	8.39	—
248	2.19	3.00	5.68	8.36	—
248	2.19	2.99	5.67	8.35	—
244	2.18	2.98	5.65	8.31	—
239	2.17	2.97	5.63	8.28	—
231	2.15	2.94	5.55	8.17	—
220	2.13	2.91	5.48	8.06	—
220	2.12	2.91	5.48	8.06	—
220	2.12	2.90	5.47	8.03	—
216	2.11	2.89	5.43	7.98	—
213	2.10	2.88	5.42	7.96	—
209	2.09	2.86	5.37	7.89	—
203	2.07	2.83	5.32	7.81	—
203	2.07	2.83	5.31	7.80	—
200	2.06	2.82	5.30	7.78	—
200	2.06	2.82	5.29	7.77	—
197	2.05	2.81	5.28	7.75	—
197	2.05	2.81	5.28	7.75	—
197	2.05	2.80	5.26	7.71	—
191	2.03	2.78	5.21	7.64	—
191	2.03	2.78	5.20	7.63	—
189	2.02	2.77	5.18	7.60	—
184	2.01	2.75	5.13	7.52	—
179	1.99	2.72	5.07	7.43	—

179	1.98	2.71	5.06	7.41	—
174	1.97	2.69	5.01	7.33	—
172	1.96	2.68	4.98	7.29	—
172	1.95	2.67	4.97	7.27	—
170	1.95	2.66	4.96	7.25	—
167	1.93	2.64	4.91	7.17	—
165	1.93	2.63	4.89	7.14	—
165	1.93	2.63	4.89	7.14	—
165	1.92	2.63	4.88	7.14	—
163	1.92	2.62	4.86	7.10	—
161	1.91	2.61	4.83	7.05	—
159	1.90	2.59	4.80	7.01	—
159	1.90	2.59	4.80	7.00	—
158	1.88	2.57	4.75	6.94	—
156	1.88	2.56	4.74	6.91	9.08
154	1.87	2.55	4.71	6.86	9.02
154	1.86	2.55	4.70	6.85	9.00
152	1.86	2.54	4.68	6.83	8.97
152	1.86	2.54	4.68	6.82	8.96
147	1.83	2.50	4.60	6.70	8.79
144	1.81	2.47	4.53	6.60	8.66
144	1.80	2.46	4.52	6.57	8.63
143	1.79	2.45	4.50	6.54	8.58
141	1.78	2.44	4.47	6.49	8.52
141	1.78	2.44	4.47	6.49	8.52
140	1.78	2.43	4.44	6.45	8.46
140	1.77	2.43	4.43	6.44	8.45
138	1.77	2.42	4.41	6.41	8.41
138	1.76	2.41	4.40	6.39	8.38
133	1.73	2.36	4.30	6.23	8.16
131	1.72	2.35	4.27	6.18	8.10
131	1.72	2.35	4.27	6.18	8.10
130	1.71	2.33	4.24	6.14	8.04
130	1.71	2.33	4.24	6.14	8.04
129	1.70	2.32	4.21	6.09	7.98
129	1.70	2.32	4.21	6.09	7.98
128	1.69	2.31	4.18	6.05	7.92
126	1.68	2.29	4.15	6.00	7.86
126	1.68	2.29	4.15	6.00	7.86
126	1.68	2.29	4.15	6.00	7.86
123	1.65	2.25	4.06	5.87	7.67
123	1.65	2.25	4.06	5.87	7.67
123	1.64	2.24	4.03	5.82	7.61
122	1.64	2.24	4.03	5.82	7.61
121	1.63	2.23	4.00	5.78	7.55
121	1.63	2.23	4.00	5.78	7.55
121	1.63	2.23	4.00	5.78	7.55
120	1.62	2.22	3.97	5.74	7.50
119	1.61	2.20	3.94	5.69	7.43
119	1.61	2.20	3.94	5.69	7.43
116	1.58	2.17	3.88	5.60	7.31
116	1.58	2.17	3.88	5.60	7.31
111	1.53	2.09	3.71	5.32	6.94
111	1.53	2.09	3.71	5.32	6.94
111	1.53	2.09	3.71	5.32	6.94
110	1.52	2.08	3.68	5.28	6.88
110	1.52	2.08	3.68	5.28	6.88
110	1.52	2.08	3.68	5.28	6.88
109	1.51	2.06	3.65	5.23	6.82
109	1.51	2.06	3.65	5.23	6.82
107	1.49	2.04	3.59	5.14	6.69
106	1.48	2.02	3.56	5.10	6.63
106	1.47	2.01	3.53	5.05	6.57
105	1.46	2.00	3.50	5.01	6.51
104	1.45	1.98	3.47	4.96	6.45
104	1.44	1.97	3.44	4.92	6.39
103	1.44	1.97	3.44	4.92	6.39
102	1.43	1.96	3.41	4.87	6.33
101	1.42	1.94	3.38	4.82	6.27
101	1.42	1.94	3.38	4.82	6.27
100	1.40	1.91	3.32	4.73	6.14
97	1.36	1.86	3.21	4.55	5.90
97	1.36	1.86	3.21	4.55	5.90
96	1.35	1.85	3.18	4.51	5.84
96	1.35	1.85	3.18	4.51	5.84
96	1.34	1.83	3.15	4.46	5.78
96	1.34	1.83	3.15	4.46	5.78
94	1.32	1.81	3.09	4.37	5.63
94	1.31	1.79	3.06	4.33	5.59
94	1.31	1.79	3.06	4.33	5.59
94	1.31	1.79	3.06	4.33	5.59
94	1.31	1.79	3.06	4.33	5.59
94	1.31	1.79	3.06	4.33	5.59

93	1.30	1.78	3.03	4.28	5.53
92	1.30	1.77	3.00	4.24	5.47
91	1.28	1.74	2.94	4.14	5.35
91	1.28	1.74	2.94	4.14	5.35
89	1.24	1.68	2.82	3.96	5.10
88	1.22	1.66	2.77	3.87	4.98
87	1.21	1.64	2.74	3.83	4.92
87	1.21	1.64	2.74	3.83	4.92
86	1.20	1.63	2.71	3.78	4.86
86	1.20	1.63	2.71	3.78	4.86
86	1.19	1.62	2.68	3.74	4.80
85	1.18	1.60	2.63	3.69	4.74
85	1.18	1.60	2.63	3.69	4.74
84	1.16	1.58	2.59	3.60	4.61
84	1.15	1.56	2.56	3.55	4.55
83	1.14	1.55	2.53	3.51	4.49
82	1.11	1.51	2.44	3.37	4.31
81	1.10	1.49	2.41	3.33	4.25
81	1.09	1.48	2.38	3.28	4.18
80	1.07	1.45	2.32	3.19	4.08
79	1.05	1.43	2.26	3.10	3.94
79	1.05	1.43	2.26	3.10	3.94
79	1.05	1.43	2.26	3.10	3.94
78	1.04	1.41	2.24	3.06	3.88
78	1.03	1.40	2.21	3.01	3.82
78	1.03	1.40	2.21	3.01	3.82
77	1.01	1.37	2.15	2.92	3.69

Beam	W/D	1 Hr., IN	1-1/2 Hr., IN	2 Hr., IN	2-1/2 Hr., IN	3 Hr., IN
W6x12	0.53	0.087	0.119	0.225	0.332	—
W14x22	0.53	0.086	0.118	0.224	0.330	—
W12x19	0.54	0.086	0.118	0.224	0.329	—
W10x17	0.54	0.086	0.118	0.223	0.329	—
W8x15	0.55	0.086	0.117	0.222	0.327	—
W16x26	0.56	0.086	0.117	0.222	0.326	—
W8x18	0.58	0.085	0.116	0.221	0.326	—
W10x22	0.61	0.084	0.115	0.220	0.325	—
W10x19	0.61	0.084	0.115	0.219	0.324	—
W12x26	0.64	0.084	0.115	0.219	0.324	—
W12x22	0.65	0.083	0.114	0.218	0.324	—
W14x22	0.63	0.083	0.114	0.218	0.323	—
W14x30	0.64	0.083	0.114	0.218	0.323	—
W10x31	0.66	0.082	0.113	0.217	0.323	—
W12x31	0.66	0.083	0.113	0.217	0.322	—
W12x27	0.67	0.081	0.112	0.216	0.322	—
W12x25	0.69	0.081	0.111	0.215	0.321	—
W8x20	0.68	0.081	0.111	0.215	0.321	—
W6x20	0.68	0.081	0.111	0.215	0.321	—
W6x16	0.68	0.081	0.111	0.215	0.321	—
W12x30	0.70	0.080	0.110	0.214	0.321	—
W16x36	0.70	0.080	0.110	0.214	0.320	—
W8x24	0.73	0.080	0.109	0.213	0.320	—
W10x26	0.71	0.080	0.109	0.213	0.320	—
W14x34	0.73	0.079	0.108	0.212	0.320	—
W12x44	0.75	0.078	0.107	0.211	0.320	—
W12x48	0.75	0.078	0.107	0.211	0.320	—
W18x40	0.77	0.077	0.106	0.210	0.320	—
W16x40	0.78	0.077	0.106	0.210	0.320	—
W16x40	0.78	0.077	0.106	0.210	0.320	—
W10x33	0.79	0.077	0.105	0.210	0.320	—
W8x31	0.80	0.076	0.104	0.210	0.320	—
W10x30	0.81	0.076	0.104	0.210	0.320	—
W14x38	0.81	0.076	0.104	0.210	0.320	—
W12x35	0.81	0.076	0.104	0.210	0.320	—
W8x28	0.82	0.075	0.103	0.210	0.320	—
W12x35	0.83	0.075	0.103	0.210	0.320	—
W12x30	0.84	0.075	0.102	0.210	0.320	—
W6x25	0.84	0.075	0.102	0.210	0.320	—
W12x35	0.85	0.074	0.101	0.210	0.320	—
W12x40	0.86	0.074	0.101	0.210	0.320	—
W16x45	0.87	0.073	0.100	0.210	0.320	—
W14x43	0.87	0.073	0.100	0.210	0.320	—
W18x46	0.88	0.073	0.100	0.210	0.320	—
W18x50	0.88	0.073	0.100	0.210	0.320	—
W8x35	0.91	0.072	0.098	0.210	0.320	—
W10x39	0.93	0.071	0.097	0.210	0.320	—
W12x40	0.93	0.071				