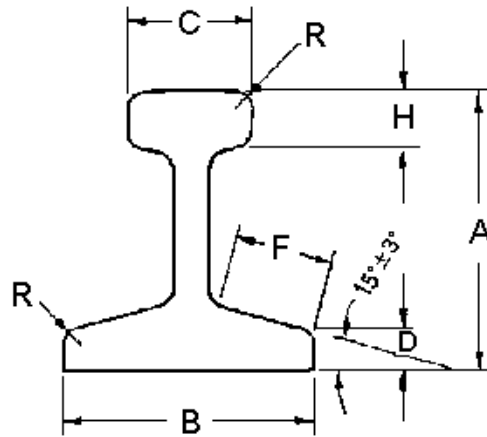


NMRA RECOMMENDED PRACTICES	
RAIL	
RP-15.1	Revised : Jan. 1990

These specifications permit the modeling of several different prototype rail sections in the various scales with a minimum number of model rail sections.



Nominal dimensions only are shown. These dimensions should be adhered to as closely as manufacturing techniques permit in order to facilitate matching rails of different manufacturers and to provide common dimensions for the installation of Rail Joiners.

No dimension is shown for web thickness of the rail. Particularly in the smaller sizes it must be a compromise between scale reduction from the prototype and a thickness that will provide mechanical strength and sufficient cross section area to carry electrical propulsion current without excessive resistance.

Hard drawn rail is preferred to medium hardness, and soft drawn or annealed rail is not recommended.

Selection of rail sections that provide 'natural flangeways' resulting from B - C dimensions corresponding to the requirements of STANDARDS-3 may expedite assembling guard rails and wing rails without fitting or spacing these rails from their stock or frog rails.

TABLE 1

CODE	A	B	C	D	F	H	R
297	.297	.250	.125	.050	.083	.062	.016
250	.250	.224	.112	.044	.073	.055	.014
208	.208	.188	.094	.038	.063	.047	.012
172	.172	.156	.078	.031	.052	.039	.010
148	.148	.132	.066	.026	.044	.033	.009
125	.125	.125	.063	.021	.035	.028	.007
100	.100	.090	.045	.018	.030	.023	.006
83	.083	.080	.040	.016	.027	.020	.005
70	.070	.070	.035	.014	.023	.017	.004
55	.055	.055	.028	.011	.018	.014	.004
40	.040	.040	.020	.008	.013	.010	.003
32	.032	.032	.016	.006	.011	.008	.003

NOTE: Special rail sections incorporating projections beyond the regular section, such as Girder Rail (self-flanging) should conform in all pertinent respects to this specification. departing from it only where necessary to their special function.

Transcriber's Note: the following two tables have become separated from this RP over the last few years and were

just located. They have been restored pending verification that they are still intended to be a part of RP-15.1 (3/18/00)

TABLE 2

PROTOTYPE		EQUIVALENT SCALE RAIL HEIGHT										
	Scale Ratio	1/2" 24	#1 32	0 48	S 64	00 76.2	HO 87.1	TT 120	N 160	Z 220		
Std	Weight	Height										
PRR	155	8.000	.333	.250	.167	.125	.105	.092	.067	.050	.036	
AREA	140	7.312	.305	.229	.152	.114	.096	.084	.061	.046	.033	
AREA	132	7.125	.297	.223	.148	.111	.094	.082	.059	.045	.032	
AREA	115	6.625	.276	.207	.138	.104	.087	.076	.055	.041	.030	
AREA	100	6.000	.250	.188	.125	.094	.079	.069	.050	.038	.027	
AREA	90	5.625	.234	.176	.117	.088	.074	.065	.047	.035	.026	
ASCE	85	5.188	.216	.162	.108	.081	.068	.060	.043	.032	.024	
ASCE	80	5.000	.208	.156	.104	.078	.066	.057	.042	.031	.023	
ASCE	75	4.812	.201	.150	.100	.075	.063	.055	.040	.030	.022	
ASCE	70	4.625	.193	.145	.096	.072	.061	.053	.039	.029	.021	
ASCE	65	4.438	.185	.139	.092	.069	.058	.051	.037	.028	.020	
ASCE	60	4.250	.177	.133	.089	.066	.056	.049	.035	.027	.019	
ASCE	55	4.062	.169	.127	.085	.063	.053	.047	.034	.025	.018	
ASCE	50	3.875	.161	.121	.081	.061	.051	.044	.032	.024	.018	
ASCE	45	3.688	.154	.115	.077	.058	.048	.042	.031	.023	.017	
ASCE	40	3.500	.146	.109	.073	.055	.046	.040	.029	.022	.016	
ASCE	35	3.312	.138	.104	.069	.052	.043	.038	.028	.021	.015	
ASCE	30	3.125	.130	.098	.065	.049	.041	.036	.026	.020	.014	
ASCE	25	2.750	.115	.086	.057	.043	.036	.032	.023	.017	.013	

*The weight of prototype Rail is expressed in pounds per yard in the United States.

To model equivalent scale height Rail in the various scales, select from Table 1 the available Rail nearest in height to the equivalent shown in Table 2 above.

Between 1938 and 1963 the reports of the Interstate Commerce Commission listed the distribution of the weight of rail used on the Class 1 railroads of the United States. The abstract below shows the increasing average rail weight between 1940 and 1960. It should be noted that short lines, narrow gage lines and traction lines used lighter rails.

TABLE 3

Weight	1940	1946	1950	1958	1960
< 70	9.54	7.23	6.68	5.28	4.91
70 - 79	10.12	8.64	7.81	6.63	6.55
80 - 89	6.63	14.08	12.88	10.99	10.85
90 - 99	32.10	18.86	16.79	14.74	14.61
100 - 109	18.69	16.94	15.35	13.37	13.58
110 - 119	11.24	17.04	20.07	23.83	23.84
120 - 129	1.91	3.03	2.09	3.17	2.98
130 - 139	9.57	13.71	16.51	20.09	20.63
> 139	0.20	0.46	1.01	1.90	2.05