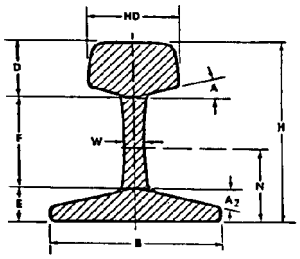
APPENDIX C
DETAILS OF RAIL SECTIONS

C-l.

Table C-1 of this appendix presents a listing of dimensions and properties for various rail sections. This table can be used with figure C-1 to assist in identifying rail sections and estimating amounts of rail wear.



(See Table D-1 For Key)

Figure C-1. Details of Rail Section.

Table C-1. Details of Rail Sections

		Manufacturer's Brand							Rail Dimensions (Inches)									
Type	Weight per yard	Ill. Steel Co. Old No.	Ill. Steel Co. Carnegie Steel Co. T C & I Co. Inland Steel Co. US Steel Corp.	Milwaukee Steel Co.	Bethlehem Steel Co. Old No.	Bethlehem Steel Co. New No.	Lackawanna Steel Co.	Colorado F & I Co.	Height (H)	Base (B)	Head (HD)	Web (W)	Depth of Head (D)	Fishing Height (F)	Depth of Base (E)	Head angle (A)	Base angle (A_2)	CL of bolts (N)
AREA	140*	....	....	....	....	140RE	....	....	7-5/16	6	3	3/4	2-1/16	4-1/16	1-3/16	3 to 1	4 to 1	4
AREA	136	....	....	....	....	136RE	....	1360	7-5/16	6	2-15/16	11/16	1-15/16	4-3/16	1-3/16	4 to 1	4 to 1	3-3/4
AREA	133*	....	13331	....	....	133RE	....	1330	7-1/16	6	3	11/16	1-15/16	3-15/16	1-3/16	3 to 1	4 to 1	3-3/4
AREA	132*	....	13225	....	....	132RE	....	1321	7-1/8	6	3	21/32	1-3/4	4-3/16	1-3/16	4 to 1	4 to 1	3-7/8
AREA	131	....	13/28	....	....	131RE	....	1311	7-1/8	6	3	21/32	1-3/4	4-3/16	1-3/16	4 to 1	4 tp 1	4-1/4
AREA	130	....	13025	....	....	130RE	....	1300	6-3/4	6	2-15/16	21/32	1-27/32	3-11/16	1-7/32	4 to 1	4 to 1	3-3/8
AREA	119	....	....	....	....	119RE	....	1190	6-13/16	5-1/2	2-21/32	5/8	1-7/8	3-13/16	1-1/8	4 to 1	4 to 1	3-1/4
AREA	115*	....	11525	....	....	115RE	....	1150	6-5/8	5-1/2	2-23/32	5/8	1-11/16	3-13/16	1-1/8	4 to 1	4 to 1	3-1/4
AREA	112	....	11228	....	....	112RE	....	1121	6-5/8	5-1/2	2-23/32	19/32	1-11/16	3-13/16	1-1/8	4 to 1	4 to 1	3-3/4
AREA	110	....	11025	....	....	110RE	....	1100	6-1/4	5-1/2	2-25/32	19/32	1-23/32	3-13/32	1-1/8	4 to 1	4 to 1	3-1/8
AREA	100*	....	10025	....	....	100RE	....	10025	6	5-3/8	2-11/16	9/16	1-21/32	3-9/32	1-1/16	4 to 1	4 to 1	2-31/32
ARA-A	100	10020	10020	565	163	100RA	10031	....	6	5-1/2	2-3/4	9/16	1-9/16	3-3/8	1-1/16	4 to 1	4 to 1	2-3/4
ARA-A	90	9020	9020	563	170	90RA	9031	902	5-5/8	5-1/8	2-9/16	9/16	1-15/32	3-5/32	1	4 to 1	4 to 1	2-37/64
ARA-A	80	8020	8020	....	169	....	8031	801	5-1/8	4-5/8	2-1/2	33/64	1-7/16	2-23/32	31/32	4 to 1	4 to 1	2-21/64
ARA-A	70	7020	7020	....	....	....	....	....	4-3/4	4-1/4	2-3/8	1/2	1-11/32	2-1/2	29/32	4 to 1	4 to 1	2-5/32
ARA-A	60	6020	6020	....	....	....	....	....	4-1/2	4	2-1/4	15/32	1-15/64	2-29/64	13/16	4 to 1	4 to 1	2-5/128
ARA-B	100	10030	10030	564	161	100RB	10032	1002	5-41/64	5-9/64	2-31/32	9/16	1-45/64	2-55/64	1-5/64	13°	13°	2-65/128
ARA-B	90	9030	9030	561	162	90RB	9032	905	5-17/64	4-49/64	2-9/16	9/16	1-39/64	2-5/8	1-1/32	13°	13°	2-11/32
ARA-B	80	8030	8030	569	171	....	8032	....	4-15/16	4-7/16	2-7/16	35/64	1-15/32	2-15/32	1	13°	13°	2-15/64
ARA-B	70	7030	7030	....	174	....	....	....	4-35/64	4-3/64	2-3/8	33/64	1-23/64	2-17/64	59/64	13°	13°	2-7/128
ARA-B	60	6030	6030	....	....	....	....	....	4-3/16	3-11/16	2-1/8	31/64	1-1/4	2-1/16	7/8	13°	13°	1-29/32
ASCE	100	10001	10040	536	247	100AS	1000	....	5-3/4	5-3/4	2-3/4	9/16	1-45/64	3-5/64	31/32	13°	13°	2-65/128
ASCE	90	9002	9040	535	245	90AS	900	....	5-/8	5-3/8	2-5/8	9/16	1-19/32	2-55/64	59/64	13°	13°	2-45/128
ASCE	85	8504	8540	531	235	85AS	850	851	5-3/16	5-3/16	2-9/16	9/16	1-35/64	2-3/4	57/64	13°	13°	2-17/64
ASCE	80	8004	8040	530	251	80AS	800	800	5	5	2-1/2	35/64	1-1/2	2-5/8	7/8	13°	13°	2-3/16
ASCE	75	7506	7540	529	214	75AS	750	753	4-13/16	4-13/16	2-15/32	17/32	1-27/64	2-35/64	27/32	13°	13°	2-15/128
ASCE	70	7010	7040	532	237	70AS	700	701	4-5/8	4-5/8	2-7/16	33/64	1-11/32	2-15/32	13/16	13°	13°	2-3/64
ASCE	65	6507	6540	534	236	65AS	650	653	4-7/16	4-7/16	2-13/32	1/2	1-9/32	2-3/8	25/32	13°	13°	1-31/32
ASCE	60	6015	6040	533	244	60AS	600	603	4-1/4	4-1/4	2-3/8	31/64	1-7/32	2-17/64	49/64	13°	13°	1-115/128
ASCE	55	5501	5540	537	130	55AS	550	...	4-1/16	4-1/16	2-1/4	15/32	1-11/64	2-11/64	23/32	13°	13°	1-103/128
ASCE	50	5005	5040	542	129	50AS	500	....	3-7/8	3-7/8	2-1/8	7/16	1-1/8	2-1/16	11/16	13°	13°	1-23/32
AT & SF	90	9021	9021	....	173	90SF	9033	903	5-5/8	5-3/16	2-9/16	9/16	1-15/32	3-5/32	1	4 to 1	4 to 1	2-37/64
Bang & Aroost	70	....	....	....	....	....	703	....	4-3/4	4-3/4	2-7/16	1/2	1-13/32	2-19/32	3/4	12°	12°	2-3/64
Can Nor	80	8010	8010	....	....	....	804	....	5	5	2-9/16	35/64	1-13/32	2-11/16	79/32	13°	13°	2-1/4
Can Pac	85	....	8524	....	176	85CP	856	....	5-1/8	5	2-1/2	9/16	1-7/16	2-11/16	1	4 to 1	4 to 1	2-11/32
Can Pac	65	6508	6508	....	...	....	654	....	4-31/64	4-3/8	2-1/4	15/32	1-9/32	2-11/32	35/64	4 to 1	4 to 1	2-1/32
C of NJ	135	....	....	....	290	....	....	....	6-1/2	6	3-5/32	3/4	2	3-9/32	1-7/32	14°	14°	2-55/64
C & A	70	7002	....	....	....	....	....	....	4-3/8	4	2-35/96	35/64	1-17/24	1-11/12	3/4	12°	12°	1-17/24

(Continued)

(Sheet 1 of 3)

Notes: See Figure D-1 for key
All dimensions in inches
* Indicates rail recommended by AREA for new purchases due to current (1989) availability.

Table C-1. Details of Rail Sections. (Sheet 1 of 3).

Table C-1. (Continued)

		Manufacturer's Brand							Rail Dimensions (Inches)									
Type	Weight per Yard	Ill. Steel Co. Old No.	Ill. Steel Co. Carnegie Steel Co. T C & I Co. Lackawanna Steel Co. US Steel Corp.	Midvale Steel Co.	Bethlehem Steel Co. Old No.	Bethlehem Steel Co. New No.	Lackawanna Steel Co.	Colorado F & I Co.	Height (H)	Base (B)	Head (HD)	Web (W)	Depth of Head (D)	Fishing Height (F)	Depth of Base (E)	Head angle (A)	Base angle (A_1)	CL of bolts (N)
C & NW	100	10035	10035	....	....	100OM	1006	....	5-45/64	5-9/64	2-9/16	9/16	1-39/64	2-61/64	1-9/64	13°	13°	2-79/128
C & NW	90	....	9035	....	....	90OM	904	....	5-17/32	5-3/32	2-1/2	1/2	1-17/32	2-31/32	1-1/32	13°	13°	2-23/64
C & NW	72	7201	7250	581	302	72NP	....	....	4-3/4	4-3/4	2-3/8	9/16	1-13/32	2-1/2	27/32	14°	14°	2-3/32
CB & Q	85	8506	8543	....	85-C	85CB	855	852	5-3/16	5-3/16	2-21/32	9/16	1-35/64	2-3/4	57/64	13°	13°	2-17/64
D & RG	90	....	....	....	....	....	....	906	5-1/2	5-1/8	2-9/16	9/16	1-5/8	2-7/8	1	14°	14°	2-7/16
D & RG	85	....	....	....	....	....	....	850	5-1/4	5-1/4	2-1/2	9/16	1-3/4	2-5/8	7/8	13°	13°	2-3/16
D & RG-C & S	85	....	....	....	....	....	....	853	5-3/8	4-7/8	2-1/2	9/16	1-15/32	2-29/32	1	4 to 1	4 to 1	2-29/64
DL & W	105	....	....	....	105-C	105DL	1052	....	6	5-3/8	2-3/4	5/8	1-23/32	3-1/4	1-1/32	13°	13°	2-21/32
DL & W	101	....	10133	....	299	101DL	10130	....	5-7/16	5-3/8	2-3/4	5/8	1-23/32	2-11/16	1-1/32	13°	13°	2-3/8
DL & W	91	....	9133	....	91-B	....	911	....	5-1/4	5-3/8	2-5/8	5/8	1-41/64	2-11/16	59/64	13°	13°	2-17/64
DL & W	75	....	....	....	75-C	....	753	....	4-11/16	5	2-1/2	1/2	1-43/64	2-13/64	13/16	18°	12°45'	1-117/128
Dudley	90	....	....	....	....	....	901	....	5-1/2	5	2-21/32	9/16	1-1/2	3-1/32	31/32	4 to 1	4 to 1	2-31/64
EJ & E	100	....	10050	....	....	....	....	....	5-9/16	5	2-21/32	9/16	1-37/64	2-51/64	1-3/16	4 to 1	4 to 1	2-75/128
Frictionless	125-1/2	....	....	....	125.5-F	....	....	....	7	5-1/2	1-13/16	11/16	2-3/8	3-13/32	1-7/32	18°	14°	2-3/4
Frictionless	98	....	....	....	305	....	....	....	5-27/32	5	2-1/2	9/16	1-31/32	2-25/32	1-3/32	15°	13°	2-31/64
Frictionless	97	....	....	....	97-B	....	....	....	5-7/8	5-9/64	2-1/4	9/16	1-15/16	2-55/64	1-5/64	13°	13°	2-65/128
Frictionless	93	....	....	....	....	....	932	....	6-1/8	5-1/2	2-1/8	19/32	1-13/16	3-3/8	15/16	13°	13°	2-5/8
Frictionless	92	....	....	....	304	....	....	....	5-7/16	5-3/8	1-15/16	5/8	2-3/32	2-5/16	1-1/32	13°	13°	2-3/16
Frictionless	90	....	9039	....	....	....	....	....	5-5/8	5-1/8	2-1/4	9/16	2	2-5/8	1	13°	13°	2-5/16
Frictionless	90	....	9029	....	....	....	....	....	6-3/32	5-1/8	1-59/64	9/16	1-15/16	3-5/32	1	4 to 1	4 to 1	2-37/64
Frictionless	79-1/2	....	....	....	79.5-C	....	....	....	5-3/16	5-3/16	1-15/16	9/16	2-1/32	2-9/32	7/8	13°	13°	2-1/64
Grt Nor	110	....	11036	....	....	110GN	....	....	6-1/2	5-1/2	2-3/4	19/32	1-5/8	3-3/4	1-1/8	1 to 4	1 to 4	3-1/4
Grt Nor	100	....	10036	....	....	100GN	1008	....	5-3/4	5	2-3/4	9/16	1-5/8	3	1-1/8	1 to 4	1 to 4	2-5/8
Grt Nor	90	9010	9024	560	160	90GN	9030	904	5-3/8	5	2-5/8	5/8	1-1/2	2-7/8	1	13°	13°	2-7/16
Grt Nor	90	....	9036	....	....	....	....	....	5-3/8	5	2-5/8	19/32	1-15/32	2-7/8	1-1/32	13°	13°	2-13/16
Grt Nor	85	8509	8553	....	....	....	854	....	5	5	2-21/32	21/32	1-19/32	2-1/2	29/32	14°	14°	2-5/32
Grt Nor	80	8009	....	....	....	....	802	....	5	5	2-13/32	5/8	1-5/8	2-1/2	7/8	14°	14°	2-1/8
Grt Nor	77-1/2	77501	....	....	....	....	775	....	5	5	2-3/8	5/8	1-11/16	2-1/2	13/16	14°	14°	2-1/16
Hock Val	80	....	....	540	....	....	....	....	5	4-59/64	2-31/64	29/64	1-95/128	2-25/64	111/128	13°	13°	2-1/16
Interb'g'h	100	10005	10005	....	100-E	100RT	1005	....	5-3/4	5-3/4	2-7/8	9/16	1-45/64	3-5/64	31/32	13°	13°	2-65/128
Interb'g'h	90	....	9050	....	90-E	90RT	902	....	5	5	2-7/8	11/16	1-25/32	2-11/32	7/8	13°	13°	2-3/64
Lehigh Val	136	....	....	....	136-C	136LV	....	....	7	6-1/2	2-15/16	21/32	1-7/8	3-7/8	1-1/4	4 to 1	4 to 1	3-1/16
Lehigh Val	110	....	11033	....	110-B	110LV	....	....	6	5-1/2	2-7/8	19/32	1-7/8	3-1/16	1-1/16	4 to 1	4 to 1	2-3/4
Mo Pac	85	8507	8550	....	....	....	853	....	5-7/32	5-1/4	2-15/32	75/128	1-3/4	2-39/64	55/64	13°	13°	2-21/128
Mo Pac	75	7512	7550	528	289	75MP	754	....	4-3/4	4-3/4	2-9/16	9/16	1-7/16	2-15/32	27/32	13°	13°	2-5/64
Nat Ry Mex	75	....	....	....	128	....	....	....	5	5	2-3/4	1/2	1-3/8	2-7/8	3/4	12°	12°	2-3/16
NYC	120	....	....	....	....	....	1201	....	7	6	3	21/32	1-5/8	4-5/16	1-1/16	4 to 1	4 to 1	3-7/32
NYC	105	....	10522	....	105-B	105DY	1051	....	6	5-1/2	3	5/8	1-5/8	3-13/32	31/32	4 to 1	4 to 1	3-1/8
NYC	100	10003	10022	....	175	....	1001	....	6	5-1/2	3	19/32	1-5/8	3-13/32	31/32	4 to 1	4 to 1	2-5/8
NYC	95	....	....	....	....	....	951	....	5-1/32	5-1/2	3	5/8	1-9/16	2-15/32	1	4 to 1	4 to 1	2-15/64

(Continued)

(Sheet 2 of 3)

Table C-1. Details of Rail Sections. (Sheet 2 of 3).

Table C-1. (Concluded)

		Manufacturer's Brand							Rail Dimensions (Inches)									
Type	Weight per yard	Ill. Steel Co. Old No.	Ill. Steel Co. Carnegie Steel Co. T C & I Co. Inland Steel Co. US Steel Corp.	Midvale Steel Co.	Bethlehem Steel Co. Old No.	Bethlehem Steel Co. New No.	Lackawana Steel Co.	Colorado F & I Co.	Height (H)	Base (B)	Head (HD)	Web (W)	Depth of head (D)	Fishing height (F)	Depth of base (E)	Head angle (A)	Base angle (A_2)	CL of bolts (N)
NYC	80	8008	8022	543	220	80DY	801	....	5-1/8	5	5	2-21/32	17/32	1-1/2	1	4 to 1	4 to 1	2-5/8
NYC & St L	85	8521	8521	....	172	....	8531	....	5-3/8	4-7/8	2-17/32	17/32	1-29/64	2-15/16	63/64	4 to 1	4 to 1	2-29/64
NYNH & H	107	....	....	....	172-D	107NH	1072	....	6-1/8	5-1/2	2-3/4	19/32	1-23/32	3-11/32	1-1/16	13°	13°	2-47/64
NYNH & H	100	10004	10034	....	100	100NH	1002	....	6	5-1/2	2-3/4	19/32	1-23/32	3-11/32	1-1/16	13°	13°	2-39/64
Nor Pac	66	6602	6602	547	....	....	....	....	4-17/32	4-1/2	2-5/16	17/32	1-27/64	2-11/32	49/64	13°	13°	1-15/16
PS-Penn	130	....	13031	589	130-B	130PS	13030	....	6-5/8	5-1/2	3	11/16	2	3-13/32	1-7/32	18°	14°	2-3/4
PS-Penn	125	....	12531	584	308	125PS	12530	....	6-1/2	5-1/2	3	21/32	1-7/8	3-13/32	1-7/32	18°	14°	2-59/64
PS-Penn	100	10031	10031	558	96-A	100PS	10030	....	5-11/16	5	2-43/64	9/16	1-13/16	2-25/32	1-3/32	15°	13°	2-31/64
PS-Penn	85	8530	8531	559	67-A	85PS	8530	....	5-1/8	4-5/8	2-1/2	17/32	1-21/32	2-15/32	1	15°	13°	2-15/64
PRR	85	8503	8533	500	67	85PG	852	....	5	5	2-9/16	17/32	1-3/4	2-3/8	7/8	13°	13°	2-1/16
PRR	70	7005	7033	504	....	70PR	....	....	4-1/2	4-1/2	2-7/16	1/2	1-19/32	2-1/8	25/32	13°	13°	1-27/32
P & R	100	....	10032	....	165	100RG	1007	....	5-5/8	5-3/8	2-21/32	9/16	1-45/64	2-55/64	1-1/16	13°	13°	2-63/128
RG So	52	....	....	....	....	....	....	521	4	4	2-1/8	25/64	1-23/64	2	41/64	13°	13°	1-41/64
Russian	67-1/2	....	....	587	....	....	....	....	5-3/64	4-21/64	2-23/64	15/32	1-29/64	2-11/16	29/32	1 to 3	1 to 3	2-1/4
Sea A Ln	85	....	8522	....	261	....	851	....	5-1/4	5	2-11/16	17/32	1-5/8	2-3/4	7/8	14°	14°	2-1/4
Sea A Ln	75	....	7522	....	221	....	....	....	5	5	2-9/16	1/2	1-3/8	2-3/4	7/8	14°	14°	2-1/4
Soo Ln	85	8520	8520	....	....	....	....	....	5-3/8	4-7/8	2-1/2	9/16	1-15/32	2-29/32	1	14°02'11"	14°02'11"	2-29/64
UP	90	9003	9023	....	....	....	....	901	5-3/4	5-3/8	2-3/4	17/32	1-1/2	3-3/8	7/8	13°	13°	2-9/16
UP	75	7513	7523	....	75-B	....	....	754	5	5	2-9/16	33/64	1-3/8	2-13/16	13/16	13°	13°	2-1/4
UP	75	7524	7524	....	....	75SP	....	757	4-15/16	4-7/16	2-7/16	33/64	1-3/8	2-5/8	15/16	4 to 1	4 to 1	2-1/4
Miscell	75	....	....	....	92	....	....	....	5	5	2-1/2	9/16	1-7/16	2-47/64	53/64	13°	13°	2-1/8
Miscell	70	....	....	....	97	....	703	....	4-3/4	4-3/4	2-7/16	1/2	1-13/32	2-19/32	3/4	12°	12°	2-3/64
Miscell	67	6704	6704	515	....	....	....	....	4-1/2	4-1/2	2-13/32	1/2	1-5/8	2-1/8	3/4	13°	13°	1-13/16
Miscell	67	....	6733	....	....	....	....	....	4-1/2	4-1/2	2-13/32	1/2	1-5/8	2-1/8	3/4	13°	13°	1-13/16
Miscell	65	6501	....	....	....	....	....	....	4-3/8	4-7/16	2-3/8	29/64	1-1/2	2-5/32	23/32	14°30'	12°30'	1-51/64
Miscell	65	6504	....	....	....	....	....	....	4-1/2	4-1/2	2-7/16	1/2	1-31/64	2-19/64	23/32	13°	13°	1-7/8
Miscell	60	6001	6051	....	....	....	....	....	4-1/4	4-1/16	2-5/16	1/2	1-7/16	2-1/8	11/16	14°	12°50'	1-3/4
Miscell	60	6017	6033	503	....	....	....	....	4-1/4	4-13/64	2-21/64	29/64	1-55/128	2-7/64	91/128	13°	13°	1-49/64
Miscell	56	5610	5610	....	....	....	....	....	4-1/4	3-31/32	2-7/32	13/32	1-7/16	2-1/8	11/16	14°	12°50'	1-13/16
Miscell	56	....	....	511	....	....	....	....	4	3-53/64	2-19/64	29/64	1-51/128	2-59/64	87/128	12°	12°	1-41/64
Miscell	56	5616	5633	....	....	....	....	....	4-1/4	4-1/8	2-1/4	3/8	1-27/64	2-1/8	45/64	13°	13°	1-49/64
Miscell	56	....	....	....	....	....	....	562	4-1/4	4-1/8	2-1/4	58/128	1-7/32	2-17/64	49/64	13°	13°	1-115/128

Notes: See Figure D-1 for key

All dimensions in inches

* Indicates rail recommended by AREA for new purchases due to current (1989) availability.

(Sheet 3 of 3)

Table C-1. Details of Rail Sections. (Sheet 3 of 3).