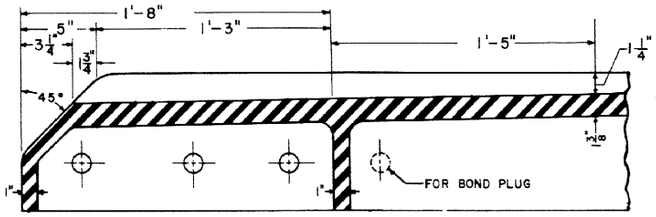
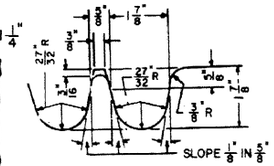
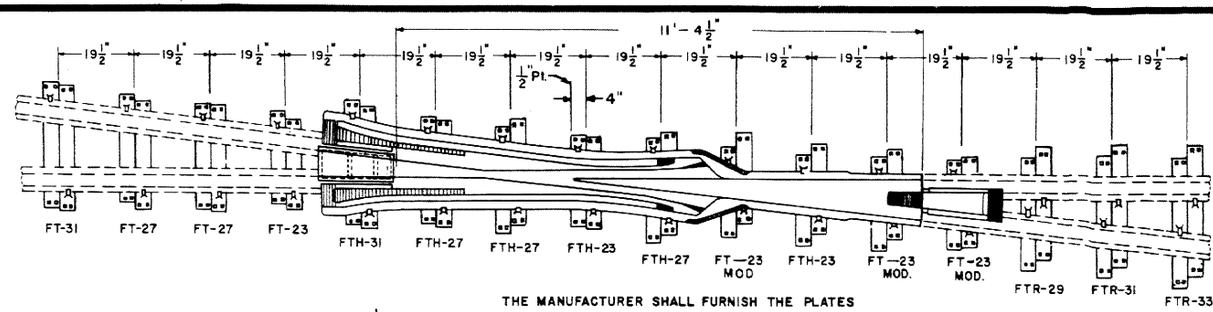
Revised:
B-March 1978
C-May 1983
D-Sept. 1985



SECTION THRU TOE EXTENSION



SECTION AT POINT

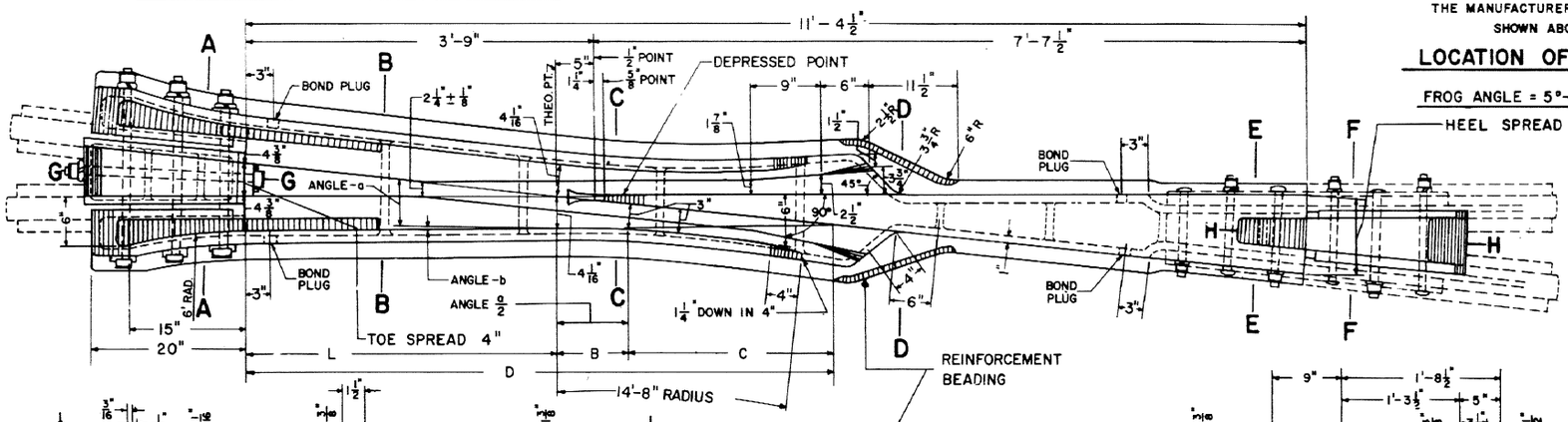


THE MANUFACTURER SHALL FURNISH THE PLATES SHOWN ABOVE WITH THE FROG

LOCATION OF FROG TIE PLATES

FROG ANGLE = 5°-43'-29"

HEEL SPREAD 9 21/32"

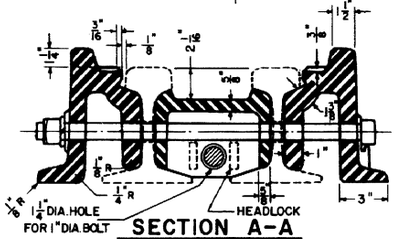


FROG TIE PLATES REQUIRED

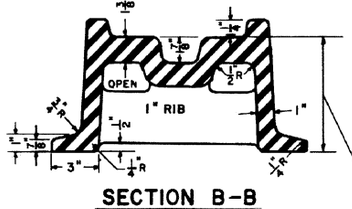
2 - FT23	FROG TIE PLATES
4 - FT23 MOD.	FROG TIE PLATES
4 - FT27	FROG TIE PLATES
2 - FT31	FROG TIE PLATES
6 - FTH23	FROG TIE PLATES
6 - FTH27	FROG TIE PLATES
2 - FTH31	FROG TIE PLATES
2 - FTR29	FROG TIE PLATES
2 - FTR31	FROG TIE PLATES
2 - FTR33	FROG TIE PLATES

NOTES

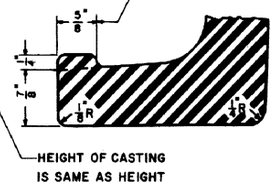
1 - THIS PLAN IS FOR USE WITH A.R.E.A. RECOMMENDED STANDARDS FOR 119 R.E., 132 R.E. OR 140 R.E. RAIL.
2 - WORKMANSHIP AND MATERIALS SHALL BE PER CURRENT A.R.E.A. SPECIFICATIONS.
3 - BOND PLUGS TO BE PROVIDED BY THE MANUFACTURER.
4 - ALL BOLTS SHALL BE DIPPED IMMEDIATELY BEFORE APPLYING (SO THAT ALL THREADS ARE THOROUGHLY COATED) IN NO-OX-ID "G G" GREASE, MANUFACTURED BY THE DEARBORN CHEMICAL COMPANY.
5 - ALL FROG TIE PLATES MUST BE CLEARLY MARKED TO SHOW PLATE DESIGNATION, AS SHOWN ON C.R. Plan 72105-().



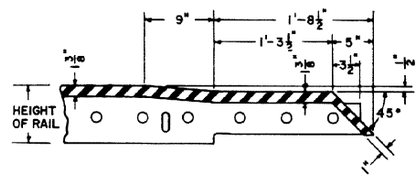
SECTION A-A



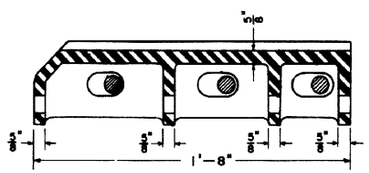
SECTION B-B



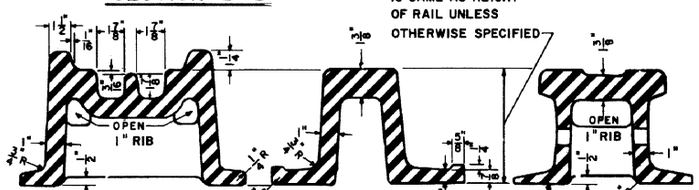
HEIGHT OF CASTING IS SAME AS HEIGHT OF RAIL UNLESS OTHERWISE SPECIFIED



SECTION H-H



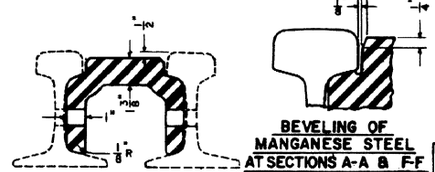
SECTION G-G



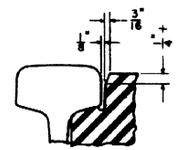
SECTION C-C

SECTION D-D

SECTION E-E



SECTION F-F



BEVELING OF MANGANESE STEEL AT SECTIONS A-A & F-F

DIMENSIONS OF RAISED GUARDS

RAIL SEC.	ANGLE-b	ANGLE-a	D	C	L	B
119 132 140 RE	0°-26'-50"	6°-10'-19"	6'-5 7/32"	2'-3 29/32"	3'-4"	9 17/32"

FORMULA FOR VARIABLE RADIUS OF RAISED GUARDS

TAN ANGLE = 5/16 / L

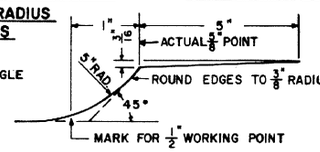
ANGLE a = ANGLE b + FROG ANGLE

D = (TOE SPREAD + 4 3/8") / TAN a

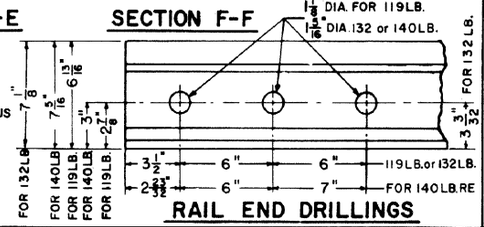
C = 3" / SIN a

B = D - (L + C)

RADIUS = B / TAN a/2



ELEVATION OF POINT



RAIL END DRILLINGS

CONRAIL

74159-D

STANDARD

No. 10 SOLID SELF-GUARDED MANGANESE STEEL FROG

119 RE, 132 RE and 140 RE RAIL

JANUARY, 1977

R H Smith
Chief Engineer-Maintenance of Way

L. B. Gordon
Chief Engineering Officer