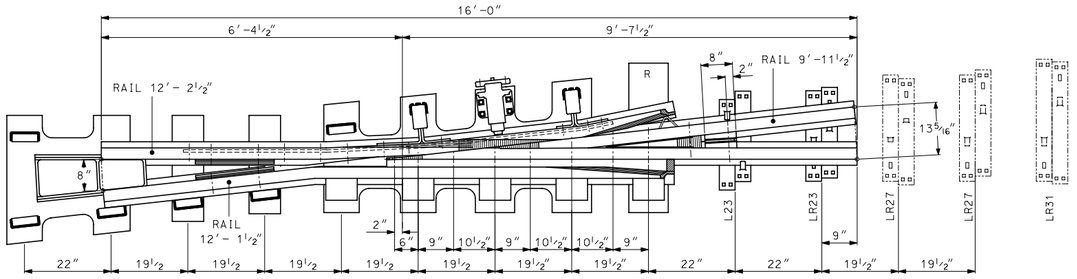
HOOK TWIN TIE PLATES
ILLUSTRATED FOR TYPE 3 RAILS

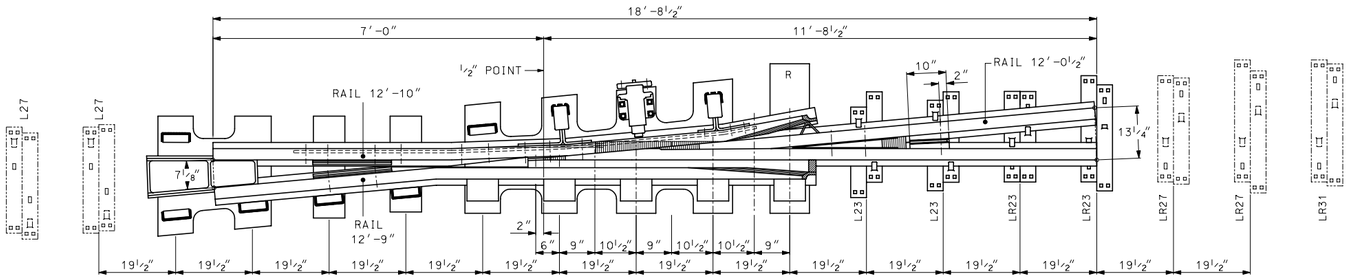
QUANTITY OF HOOK TWIN TIE PLATES					
MARK	L23	L27	LR23	LR27	LR31
TYPE I RAILS	2	0	2	2	0
TYPE II RAILS	2	0	2	4	2
TYPE III RAILS	2	0	2	4	2



No.9 SPRING RAIL FROG
ANGLE 6°-21′-35″

HOOK TWIN TIE PLATES
ILLUSTRATED FOR TYPE 3 RAILS

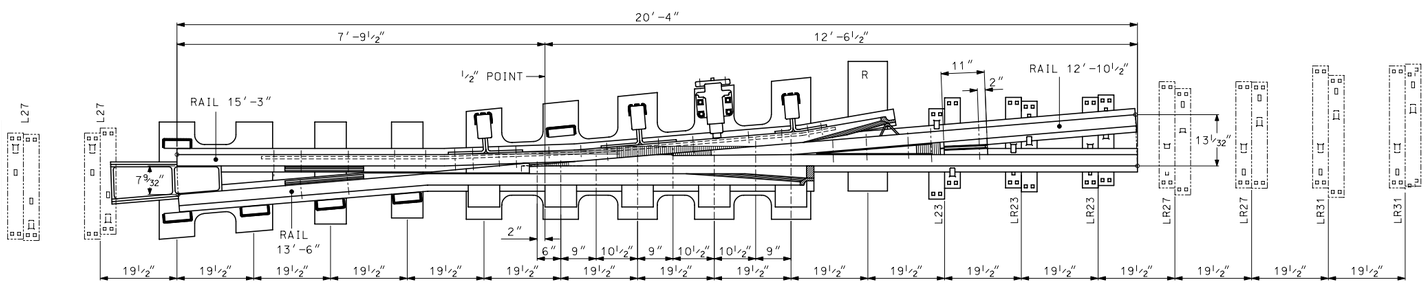
QUANTITY OF HOOK TWIN TIE PLATES					
MARK	L23	L27	LR23	LR27	LR31
TYPE I RAILS	4	2	4	2	0
TYPE II RAILS	4	2	4	4	0
TYPE III RAILS	4	4	4	4	2



No.11 SPRING RAIL FROG
ANGLE 5°-12′-18″

HOOK TWIN TIE PLATES
ILLUSTRATED FOR TYPE 3 RAILS

QUANTITY OF HOOK TWIN TIE PLATES					
MARK	L23	L27	LR23	LR27	LR31
TYPE I RAILS	2	4	4	4	0
TYPE II RAILS	2	4	4	4	2
TYPE III RAILS	2	4	4	4	4



No.12 SPRING RAIL FROG
ANGLE 4°-46′-19″

NOTES

1-RAIL AND JOINT BARS. Purchaser shall specify weight and designation of rail section and joint drilling and shall supply complete details of joint bars.

2-FILLERS. Main filler shall be of rolled steel in one continuous length per Plan Basic No.325, and shall maintain the required flangeway throughout. Heel filler block to be of cast iron. Point filler shall be of steel.

3-HEEL RISER BLOCK. Heel riser block shall be of steel rail, head up, with flange upset to fit properly over and rest upon the bases of adjoining rails, or of other approved design, and will ensure a proper bearing on bases of the point rails and will provide rolled or forged steel wearing surface equal in hardness to rail steel.

4-PLATES. Individual tie plates shall be ¾″ thick and of width shown on plan. Hook twin tie plates as listed in tables shall be furnished with frog unless otherwise specified. For details and applications of these plates see Plan Basic No.241. Quantities shown are based on 19½″ tie spacing with center of one tie 4″ back of ½″ point. Rails in tables are classified by the following widths:

TYPE I RAILS: - Rails having base up to 5 3/16″ and head 2 9/16″ inclusive.

TYPE II RAILS: - Rails having base up to 5½″ and head 2¾″ inclusive.

TYPE III RAILS:- Rails having base up to 6″ and head 3″ inclusive.

5-GROOVE FOR WORN WHEEL TREADS: Machine groove ¼″ deep below top of rail across spring wing rail and long point rail from first bend ahead of ½″ point to 5″ from gage line on short point.

6-ALTERNATES. To be furnished when specified.
a) Spring Wing Retarder, design and location to be approved by purchaser.
b) Hook Twin Tie Plates - for use with joint bars having toe extending beyond rail base. Type H plates of suitable length to be substituted for Type LR plates at heel joint.

7-GENERAL REFERENCES.
a) FLARES. See Plan Basic No.350 for details.

b) BEVELING. See Plan Basic No.1005 for beveling of running rail ends.

c) SPIKE HOLES. See Section 7.3 of Plan Basic No.100

d) BONDING. Per details specified by purchaser.

8.- SPECIFICATIONS. See AREMA Plan Basic No.100

AMERICAN RAILWAY ENGINEERING
AND MAINTENANCE OF WAY ASSOCIATION

No. 9, No. 11, AND No. 12
SPRING RAIL FROG

PLAN NO. 407-03

Adopted 1959, Revised 1982, Converted to C.A.D. May 1992. C.A.D. Updated July 2003