

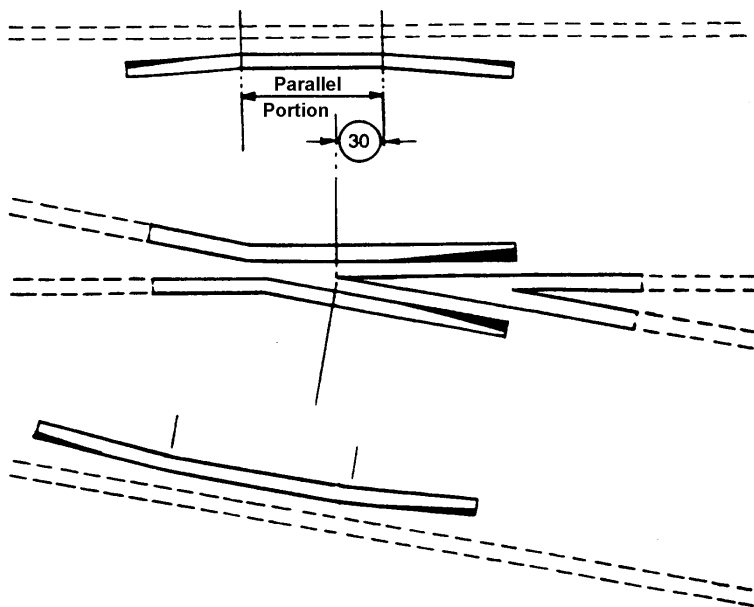
NMRA RECOMMENDED PRACTICES	
GUARD RAIL & FROG RELATIONSHIP	
Issued: Aug. 1981	RP-13.5

NMRA RECOMMENDED PRACTICES RP-13.5 Guard Rail & Frog Relationship

This series of **RECOMMENDED PRACTICES** extends, amplifies and details the **RP-12** series on Turnouts. To minimize confusion, duplicated dimensions will carry the same key number in both series.

The purpose of the Guard Rail is to guide wheels thru the desired side of the frog without splitting the frog point. Accordingly, the Parallel Portion must cover the entire open flangeway ahead of the frog. Thus the Guard Rail should be located with the larger portion ahead of the frog point with only the minimum portion [30] extending past the point as tabulated below:

Note **



Scale:	Minimum Guard Rail Setback [30]
O	1/8"
S	3/32"
On3/OO	5/64"
HO	1/16"
Sn3	1/16"
TT	3/64"
HOn3	3/64"
N	1/32"

Note that curvature thru the turnout is not continuous. The Gage Line for the entire overall length of the Frog Heel and Toe (see **RP-13.7**) is straight, and to hold Track Gage constant the Stock Rail must also be straight for the same distance, regardless of what direction the track may take beyond the Frog.

NMRA STANDARDS list the extreme limits beyond which Interchange and satisfactory performance are questionable. Within these limits it is good practice to lay turnouts as close as practicable to minimum Track Gage (G in **S-3**) and minimum Check Gage (C in **S-3**) with approximately equal width flangeways close to their minima (G - C) and (C - S) in order to provide the smoothest passage across the double width flangeway at the point of the frog, being careful not to exceed the maximum allowable Span (S in **S-3**).

If curvature of the Closure Rails (see **RP-12**) is so sharp and the equipment wheelbase so long as to require widening both Track and Check Gage, such widening should be the minimum amount required. Recommended practice is to move only the Stock Rail and its adjoining Guard Rail on the inside of the curve to the required width. Under extreme conditions it may be necessary to widen flangeways also. Exercise care not to exceed the maximum limits of either Span or Flangeway Width (S and F in **S-3**).

The **NMRA STANDARDS GAGE** and **RP-2** will be found helpful in checking these limits. The close interplay between **NMRA STANDARDS** and **RECOMMENDED PRACTICES** is exemplified by the above.

**** Note:**

Circled numbers on the drawing are represented by numbers in brackets in the text. [30] represents the number 30 in a circle.