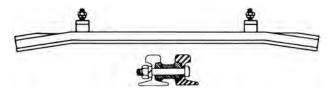


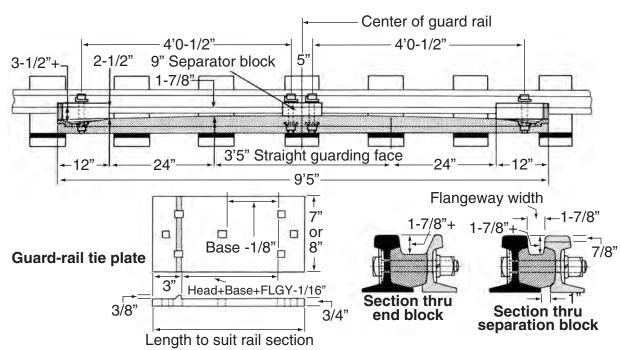
GUARD RAILS

A guard rail is installed parallel to the main running rail and helps maintain proper wheel alignment. It is especially important near frogs, where it helps prevent derailments and safeguards the frog point.

American Mining Congress-style guard rails (illustrated below) are typically used with lighter rails in mining operations and industrial facilities. These rails are modified by bending the flares and removing the flanges. They are attached to the stock rails using mounting blocks and bolts. The recommended lengths by the American Mining Congress are as follows: 4' 6" for No. 2, 2-1/2, and 3 frogs; 6' 0" for No. 4, 5, and 6 frogs; and 8' 3" for No. 7 and No. 8 frogs. A flangeway width of 1-5/8" is standard for rail weights up to 75 pounds, while 1-7/8" is used for rails weighing 80 pounds or more.



AREMA-style guard rails are designed with planed and beveled ends and include special end and separator blocks. These come complete with all necessary hardware—bolts, nuts, spring washers, head locks, and web washers. These guard rails are commonly installed using either flat or shouldered single tie plates, or flat or hook-style twin tie plates. Tables below provide detailed specifications for standard lengths and the required number of blocks and plates.



AREMA Design Plan 504-71

Length	Separator Block	End Block	Plates
9'5"	1	2	7
12'6"	2	2	9
15'0"	2	2	10

AREMA Design Plan 504-89

Length	Separator Block	End Block	Plates
13'0"	2	2	9
16'6"	3	2	11
20'0"	4	2	13