

TRACK AND ROADBEDS

TEMPERATURE CONDITIONS . . .

Temperature conditions must be considered when selecting car pullers to be located in regions where cold weather prevails over a portion of the year. The factors shown in TABLE 3 are to overcome bearing friction only. If rope is frozen in ice and snow, special consideration must be taken.

Degrees Fahrenheit	50 +	40	30	20	0	-10	-20 Below
Running Rope Pull Lbs. Per Ton Add To Table #1	0	1	2	3	5	7	10

Table 3 — Temperature Factor Loading

TRACK CURVATURE

Track curvature is expressed in terms of radius in feet, degrees of curvature or by chordal factor (A). The degree of curvature is the included angle in degrees for a 100 foot chord across the center-line of the track. Factor (A) is the chordal distance for a 50 foot chord on the inside rail. To obtain the chordal factor, stretch a 50 foot line across the curve and measure (A) as shown in Figure 3. It should be noted that this factor applies only to those cars within the curved section.

Refer to TABLE 4.

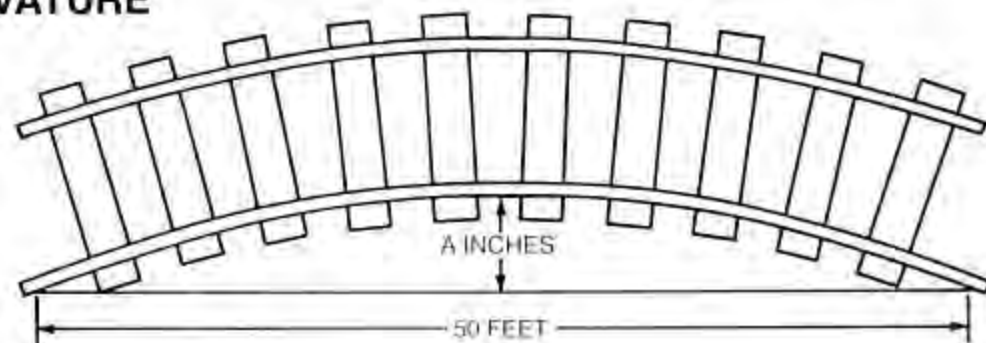


Figure 4

Degrees Of Curvature	Chordal Factor (A) Inches	Radius Of Curvature Measured To Center-Line Of Track In Feet	Required Additional Rope Pull Lbs./Ton
1	3/4	5728	2
3	2	1910	4
5	3 1/2	1148	5
7 1/2	4 7/8	765	8
10	6 3/4	572	10
15	10	384	17
20	13 1/4	286	20
25	16 1/2	231	25
30	19 7/8	194	32

Table 4 — Curve Factor Loading

TRACK SWITCHES

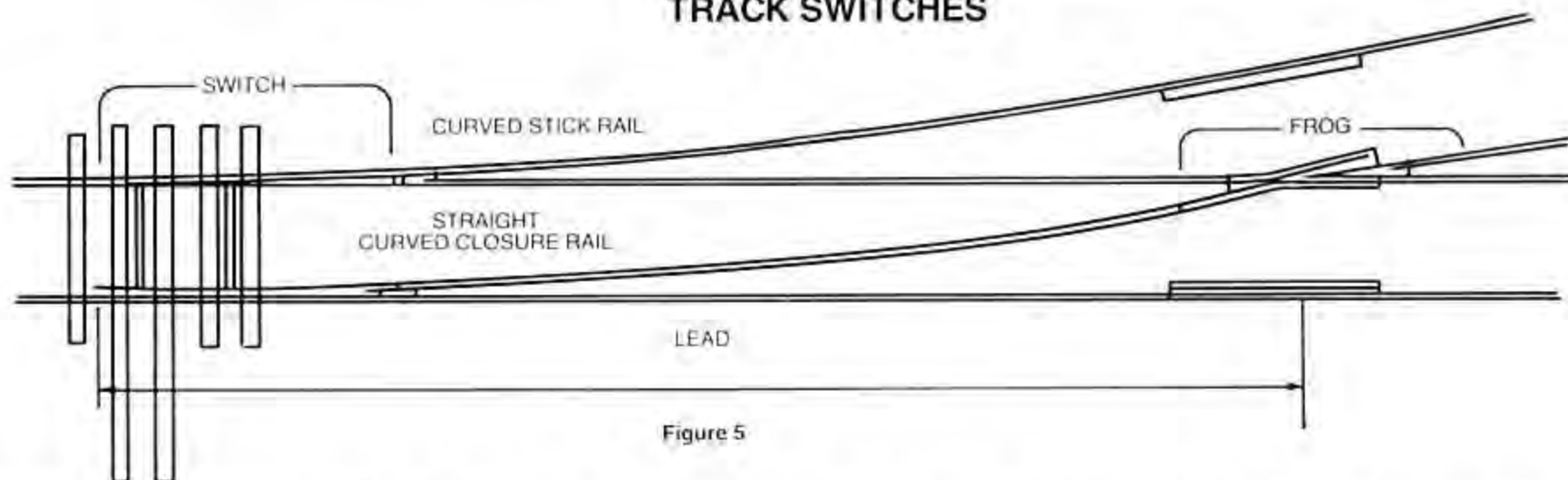


Figure 5

It is recommended that when cars are pulled through a switch the degree of curvature in the tracks at the switch should be established. It is also necessary to know the total length of the curved and straight section of track and how many cars that are in that portion. Table No. 5 shows some typical switch proportions.

NOTE: For each degree of curvature in the switch track, add 2 Lbs. per ton for each ton of cars located within the switch section of track.

Frog No.	Turnout Lead, Ft.	Sharpness Of Curve	Typical Locations
6	48	21°	Industry Tracks
8	67	12°	Yards
12	97	5°	Low-Speed Crossovers
16	131	3°	Passing Tracks
20	152	1°45'	Junctions

Table 5 — Track Switches