

system. Such a system is in service on 511 miles of double-track line on the Chicago & North Western between Chicago and Council Bluffs, Iowa, the first section being installed in 1925, followed by other territories during 1926, 1927 and 1928. On territories of the Illinois Central where continuous cab signaling and automatic train stop, without speed control, are in service without wayside permissive signals, no stop is required at the wayside locations, the speed in the "red" block being limited by rule to 15 m.p.h. This system has been in service on 122 miles of double track between Champaign, Ill., and Branch Junction since 1926, and on 97.6 miles of single track between Waterloo, Iowa, and Ft. Dodge since 1926.

Adopting this practice on a much broader scale, in March, 1930, the Illinois Central modified its Rule 282 (the "Stop-and-Proceed" rule, Code 291) on all divisions outside of the Chicago terminal, the timetable rule reading as follows: "On two or more tracks; trains may pass 'Stop-and-Proceed' signals without stopping, proceeding at a speed of not exceeding fifteen (15) miles per hour." In July, 1933, the rule was made effective on single-track lines where absolute permissive automatic block signaling is in service. Thus, for several years the Illinois Central has had this rule in effect on other than automatic train stop territory, on 1,375 miles of multiple track and 995 miles of single track.

Problem Again Deserves Study

Many roads may not consider it advisable to change their practice as the Illinois Central did. Nevertheless, it may be advisable to secure the benefits at a great many locations by the more extensive use of the markers now used only at signals on ascending grades. Some

signal engineers may raise a question to the effect that if trains are not to be required to stop at a signal, why should not Code Rule 290, aspect A (red-over-yellow) be used, giving an indication—Proceed at restricted speed?

Referring again to the answers in the November issue, it will be seen that the New York Central uses the regular grade markers at locations where only freight trains are to eliminate the stop, while at locations where both passenger and freight trains are permitted to pass without stopping, the red-over-yellow aspect, Code Rule 290, is used. At locations where it is desirable to keep trains moving without stopping them at signals on grades, the Lehigh Valley has for years used Rule 501GG, Indication—"Proceed at slow speed with caution, prepared to stop short of train or obstruction," Name—Caution-slow-speed signal. In semaphore automatic signal territory, a short lower arm is fixed at 45 deg., this arm being illuminated at night. Where position-light automatic signals are used, the aspect is a horizontal row of lights over a row of lights at 45 deg. in the lower right-hand quadrant. On some long ascending grades on double track in mountain territory, the Atchison, Topeka & Santa Fe controls the signals on the up-hill track so that the most restrictive aspect displayed is 45 deg. for the semaphore blade, and the yellow light.

Regardless of the type of markers used or the aspect adopted to eliminate train stops at permissive signals as a means of reducing train delays, the key to the entire problem is whether the operating officers will accept the responsibility for their enginemen observing the rules with respect to train speeds and caution when proceeding in a block under the authority of a permissive automatic signal.

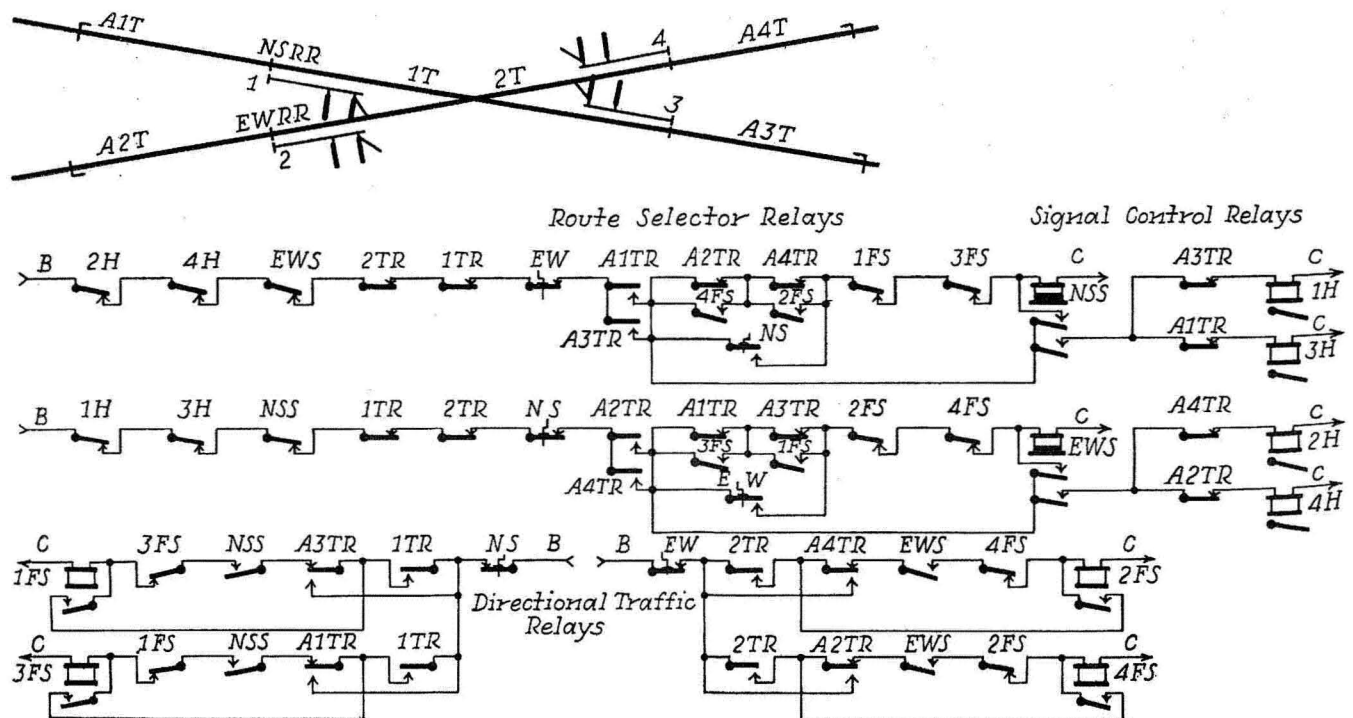


Diagram of circuits for automatic interlocking as explained in article on the opposite page

