CTC Signs

Do you use wayside signs indicating "Begin CTC" and "End of CTC"? If so, where are these signs located with respect to the first and last controlled signals, respectively? Please explain giving specific distances, using a sketch if desirable.

Sheet Steel Signs

By G. K. Thomas
Signal Engineer, System Atchison, Topeka & Santa Fe Topeka, Kan.

The Atchison, Topeka & Santa Fe makes use of wayside signs indicating "Begin CTC" and "End CTC" similar to those shown on AAR Signal Section Drawing 1293, except that they are made of sheet steel instead of cast iron.

Both of these signs are installed at the first controlled signals entering CTC territory, preferably at the right-hand side of track governed, facing the direction of trains approaching the sign. Where the presence of other tracks interferes with such location, the sign may be installed at the left-hand side of track governed, and a two-faced sign may be used with "Begin CTC" on one side and "End CTC" on the other.

Use One Sign

By C. L. Summers
Assistant to Superintendent Communications & Signals St. Louis-San Francisco Springfield, Mo.

In our earlier CTC installations we used two signs. With respect to the locomotive engineers' view, the "Begin CTC" sign was placed to the right of the first controlled signal and the "End CTC" sign was placed to the right of the last controlled signal.

In recent years we have used only one sign with the words "Begin CTC" on one side and "End CTC" on the opposite side. The sign is placed to the right of the first controlled signal.

Two Signs Used

By J. G. Karlet
Assistant Superintendent Signals Norfolk & Western Roanoke, Va.

On the Norfolk and Western, signs are used to indicate the limits of track where traffic-control method of operation is in effect. Such territories are indicated in the time cards. However, track side signs are in-
The standard black and white striping of automatic crossing gate arms is very effective both by day and by night. The three red lights on the arm assist in making it especially visible at night, and it hardly seems necessary to also use reflectorized striping on the arm.

We have experimented at a few locations with the addition of reflective material over the white surfaces of the arms, and they do, of course, add to the brilliance at night. However, there has been some peeling of the strips, and in view of the frequent breakage of these arms by highway traffic, the use of reflective strips would add to maintenance expense and would result in additional delay getting the gate back in service each time it is broken. All things considered, it does not appear to be necessary or worthwhile to add reflectorized striping on these gate arms.

**Switch Machines for CTC**

In centralized traffic control territory, do you use dual-control switch machines? Please explain why, or why not.

**Standardize on Dual-Control**

By R. E. Testerman
Assistant Superintendent
Communications & Signals
St. Louis-San Francisco
Springfield, Mo.

The crank-type power switch machine was used in our first CTC installations primarily on account of the cost. We have since standardized on the dual-control machines for the following reasons:

1. During construction the dual-control machine can be installed to replace the old switch stand and operated as a hand-operated switch. This greatly reduces the work necessary on the day CTC is placed in service.
2. In event of emergency or when "track and time" limits are granted for switching, train movements are expedited. This is especially true at crossover or other locations where more than one power switch movement is used. In such layouts considerable time is saved by not having to return the crank to the central telephone booth.
3. In event of complete failure of CTC system the dual-control movements, when placed in hand operating position, provide safety equal to that of a standard switch stand. Where the crank-type movements are used, there is always the possibility that the crank may not be turned far enough to lock the switch. To protect this feature we require that such switches be spiked.
4. Considerable time is saved in making regular inspections and tests by signal and track forces.

**Use Dual and Non-Dual Control**

By H. L. Moreley
General Signal Inspector
Delaware & Hudson
Albany, N. Y.

The Delaware & Hudson uses both dual and non-dual control for its power switch layouts in traffic.