American Railway Engineering and Maintenance of Way Association
Letter Ballot 38 21-07

1. **Committee and Subcommittee:**

   AREMA C&S Committee 38

2. **Letter Ballot Number: 38 21-07**

3. **Assignment:**

   MP's revised at Fall 2021 meeting.

4. **Ballot Item:**

   Ballot 38 21-07: This ballot contains the MP approved at the Fall 2021 meeting:

   04.01.25 - Recommended Operating Guidelines for a System of Non-Interlocked Power Operated Yard Switches Without Signals

5. **Rationale:**

   Revised Manual Parts

Recommended Operating Guidelines for a System of Non-Interlocked Power Operated Yard Switches Without Signals

~~Revised 2018~~Revised~~affirmed~~ 2023 (3 Pages)

A. Purpose

This Manual Part recommends operating guidelines for a system of non-interlocked power operated yard switches without signals.

B. Switch Position Indicators

1. Wayside switch position indicators shall be used to indicate position of switch points.

2. A normal and reverse indicator or equivalent shall be provided on the control panel for each switch.

C. Route Indicator

1. Wayside route indicators may be used to indicate that a route has been lined at an entrance to the controlled area.

2. If locked routes are employed, route indicators should be displayed on the control machine.

D. Switch and Route Controls

1. Detector locking shall be provided by means of track circuit, presence detector, or other applicable device.

2. Control circuits may be so arranged that if the switch is trailed through, switch points shall be held in the trailed position until detector locking is released, at which time the switch points should assume a position in agreement with that required by the control system.

3. Switch control circuits shall be so designed that the position of the switch points will follow the position of the control selector except as follows:

   a. When detector circuit is occupied.

   b. When switch machine is conditioned to be thrown by hand.

   c. When switch is being trailed through while detector locking is effective.

d. When a route is lined that affects the switch.

e. Switch has locking selector set to provide personal protection.

4. If, for any reason, the position of the switch does not agree with the control selector, an out of correspondence indication shall be displayed on the control machine.

E. Control Machine

Control Machine shall conform to Manual Part 4.2.1 (Recommended Design Criteria and Functional/Operating Guidelines for Classification Yard Control Systems), as it applies.

F. Switch Machine

Switch machine shall conform to Manual Part 4.2.5 (Recommendations for Switch Operating Mechanism for Yards).

G. Detector Locking

1. The effective length of occupancy detector zone shall properly detect any car or locomotive regardless of length or inner wheelbase, which may be operated over the switch.

2. The occupancy detector zone shall extend a sufficient distance on the facing point side of the switch to allow the switch to complete its movement in the event of a simultaneous shunt and switch movement request. Detector zone calculations should be based on the maximum authorized speed through the zone.

3. A switch, once started, shall complete its movement regardless of detector locking.

4. A switch which is unable to complete its requested movement may automatically return to its previous position. The occupancy detector zone shall be adjusted to allow the switch to throw and restore before car arrival.

H. Switch Lockout / Disable

1. A switch lockout may be incorporated in the local switch controls to disable the switch for personnel or other protection purposes.

2. The lockout condition can be communicated to the control station with other indications.

3. Switch may be locked out as additional protection of carmen under blue flag protection.

4. Switch may be locked out for protection of Roadway Workers or from routing into a track defect or other safety-sensitive condition.

5. A craft-specific lock must be used to protect the track. Ensure that other means to throw the switch are also protected with a craft specific lock, as applicable.

H. Power Supply

Power supply should be adequate for the service required. Stand-by service should be provided as required by the railroad.

I. Communications

1. Communication facilities may be provided between point of control and yard switching area.

2. Switches may also be controlled by hand-held or remotely located radio or panel device.

3. Security of radio messaging shall be addressed by specific protocol and/or radio system security features.

4. Audible or visual feedback of switch positions shall be provided to the controlling device.

J. Operation

Specific operating rules and instructions shall be provided to govern movements over these switches.