8830.2125 PLAN APPROVAL FOR ACTIVE WARNING DEVICE.

Subpart 1. **Information required.** Modifications, replacements, and installations of active warning devices at grade crossings must be made in accordance with plans approved by the commissioner.

The following information must be provided by the rail carrier to the commissioner:

A. the grade-crossing inventory number as provided for in part 8830.0300 and the exact location of the grade crossing in terms of rail carrier stationing or distance from the nearest milepost;

B. proper name of the roadway crossing the railroad track, including county, state, or federal highway designations;

C. city where the grade crossing is located or city nearest to the grade crossing;

D. listing of plans, special instructions, data forms, informational reports, and documents sent with the application;

E. reasons for making changes in existing control systems for warning devices;

F. two complete sets of plans;

G. wiring diagram of active warning devices, or if on file, may be referred to;

H. changes of existing active warning device facilities and controls, clearly identified on plans by color code or other suitable means, except that if plans reflect only new work, they need not be colored or otherwise coded;

I. upon request, information necessary to completely analyze the active warning device control system;

J. complete plans with respect to the active warning device control system for the grade crossing involved. When block-signal systems are involved, the block-signal controls incorporated in the active warning device control system must be shown to the extent applicable;

K. electronic equipment adequately defined by numerical or other designation supplied by the manufacturer and the name of the manufacturer, so that complete functional and performance characteristics of the active warning device control system can be accurately determined and evaluated;

L. frequency of audio frequency track circuits and other audio equipment shown on the plans;

M. when electronic control equipment consisting of a self-contained unit arranged for incorporation within the active warning device control system is employed and identified only by a box symbol with identifiable terminals within the control circuit

diagram, the name of the manufacturer and adequate information to enable accurate determination of the circuits within the self-contained unit, including:

(1) if the circuits are published by the manufacturer of the equipment as a coherent control system, reference to type, model, or other identifying means; or

(2) if the circuits are not published by the manufacturer as a complete and coherent system, copies of the circuits to be employed and a block diagram or other means of determining how they will be related;

N. definitions of special symbols or nomenclature used only by the rail carrier and not found in the AREMA signal manual, publications of manufacturers of active warning device equipment, or other generally recognized sources of information in the rail industry;

O. the length of approach track sections, shown on the plans;

P. the length of island track circuits shown on the plans;

Q. the method of calculation employed by the rail carrier in determining the anticipated warning time for a train approaching the grade crossing at average maximum authorized speed, the active warning device system reaction time, the over-speed tolerance, if any, and any other factors considered;

R. ampere hour capacity of battery stated on the plans;

S. supplementary supporting information when necessary to clarify and support special design features of the active warning device controls or active warning devices, which may consist of, but is not limited to:

(1) daily traffic volume and peak traffic density of motor vehicles over the grade crossing, if this information is available from the road authority;

(2) daily traffic volume and peak traffic density of train movements over the grade crossing;

(3) special operating instructions that apply to the warning devices at the grade crossing or indirectly affect them; and

(4) general operating rules effective in the design of the control system for the active warning devices; and

T. when the control system for roadway intersection traffic signals is to be interconnected with the control system for active warning devices at a grade crossing:

(1) a plan showing how the electrical interconnection will be made;

(2) a sequence chart approved by the state and local authorities concerned, showing the operating sequences possible for the traffic signals; and

(3) a dimensioned or scale plan drawing showing the location of the traffic signals at the roadway intersection and the active warning devices at the grade crossing.

The road authority shall provide the traffic signal plans and the rail carrier shall provide the active warning device plans. Plan submittals will be coordinated by the commissioner.

Subp. 2. **Standards of review.** The commissioner will review the plans for proper location of active warning devices in accordance with the MMUTCD, provisions to provide the required warning to motorists, and provisions to prevent unnecessary operation or excessive operation of the active warning devices. When approved, the commissioner will return one complete set of plans to the rail carrier.

Statutory Authority: *MS s 218.071; 219.073; 219.165; 219.17; 219.384; 222.50; 222.58; 222.63*

History: *23 SR 524*

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