

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

On the Commissioner's Own Motion for a Determination of the Adequacy of Warning Devices at the Grade Crossing of the Union Pacific Railroad Co. Tracks with CTH 'H' in the Town of Cutler, Juneau County

9040-RX-1195

FINDINGS OF FACT AND ORDER

On November 18, 2004, the Commissioner of Railroads directed the staff of the Office of the Commissioner of Railroads (OCR) to investigate the adequacy of warning devices under §195.28, Stats., at the grade crossing of the Union Pacific Railroad Co. (UP) tracks with CTH 'H' in the Town of Cutler, Juneau County (Crossing No. 179 279H / MP 148.4).

An OCR investigator inspected the crossings in December 2004. No hearing was held.

Findings of Fact

THE COMMISSIONER FINDS:

CTH 'H' is about 21' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of 90°. CTH 'H' carried an average daily traffic (ADT) of 270 according to 2002 DOT records at a legal speed limit of 55 mph.

The UP operates 12 train movements per day over the crossing at a timetable speed of 40 mph. The crossing consists of one mainline track.

The exposure factor at this crossing is 3200. The exposure factor equals the product of the number of trains per day and the number of highway vehicles per day, which yields a numerical value for the potential conflicts each day at the crossing.

Two train-vehicle accidents have occurred at this crossing since 1973. Both accidents occurred in 2001.

An accident prediction model developed by the Federal Railroad Administration (FRA) allows a projection of expected future accidents based on a number of factors including train volume and speed, highway volume and accident history. The model can be used to compare the expected accident rates given different warning devices. The predicted rate, however, is only one tool for evaluating safety improvements and does not replace sound judgment based on a consideration of all known factors.

The CTH 'H' crossing has a predicted accident rate of 0.12 accidents per year, or one accident every 8.3 years, with the present warning devices.

The Wisconsin Department of Transportation has produced a benefit-cost analysis for all at-grade crossings in the state. Installing new automatic flashing lights with gates and constant warning time circuitry at the CTH 'H' crossing has a net benefit of about \$108,000. The benefit-cost ratio is about 1.67 meaning that the public will receive \$1.67 in safety benefits for each dollar expended.

Accidents that do occur here will likely be quite serious if a through train is involved due to their 40 mph speed. Train speed is strongly correlated with fatalities in train/vehicle accidents. More specifically, crossings with train speeds of 40 mph and over have a disproportionate number of fatalities. According to Federal Railroad Administration (FRA) statistics, nationally, in 1994 71% of fatalities occurred at crossings with train speeds of 40 mph+, even though only 26% of all crossings had train speeds of 40 mph+.

The crossing presently has advance warning signs, crossbucks and yield signs for warning devices. The existing warning devices are inadequate. The existing warning devices will be adequate until such time as the new warning devices are installed. In order to adequately protect public safety 12" LED automatic flashing lights with gates and constant warning time circuitry are needed because of the accident history, predicted future accidents, and the net benefit.

Constant warning time circuitry adjusts for train speed and causes the crossing signals to always operate for the same amount of time before the train reaches the crossing, regardless of train speed. A motion detector simply detects the train operation, but does not adjust for train speed so that the amount of warning time varies based on train speed.

Light emitting diodes (LED) lamps replace incandescent bulbs. LEDs have higher conspicuity, a wider cone of vision, and longer life than incandescent lights. LEDs are especially useful on east-west roadways where the rising and setting sun may make the signals difficult to see.

Source of funding: The source of funding shall be 50% from the Union Pacific Railroad Co. and 50% from OCR safety funds.

Conclusion on the Issue

THE COMMISSIONER CONCLUDES:

That in order to adequately protect and promote public safety, it is necessary to install and maintain 12" LED automatic flashing lights with gates and constant warning time circuitry at the crossing of the tracks of Union Pacific Railroad Co. with CTH 'H' in the Town of Cutler, Juneau County.

Conclusion of Law

THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §195.28, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

Order

THE COMMISSIONER ORDERS:

1. That the **Union Pacific Railroad Co.** shall install and maintain 12" LED automatic flashing lights with gates, and constant warning time circuitry with appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with CTH 'H' at-grade in the Town of Cutler, Juneau County by **December 31, 2006** (Crossing No. 179 279H / MP 148.4).

2. That the **Union Pacific Railroad Co.** shall submit to the Office of the Commissioner of Railroads signal and circuit plans with the cost estimate of its proposed installation and upon completion of the signal project, a detailed statement of the actual cost to the Office and to the Wisconsin Department of Transportation.

3. That the signal installation work herein ordered shall not begin until the district office of the Wisconsin Department of Transportation informs the railroad that they may start such work and such start notice will not be issued until appropriate federal aid or other funding arrangements have been assured. The cost of the new project initiated before the start notice will not be reimbursed with public funds and shall be the responsibility of the railroad.

4. That the **Union Pacific Railroad Co.** shall bear 50% of the cost for the signals materials and installation and the State of Wisconsin shall pay the remaining 50%, The Union Pacific Railroad Co. shall also be responsible for any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly.

5. That if the petitioner, railroad or any interested party objects to this order and requests a hearing within 20 days of the date of this order in writing, the Office will hold a public hearing.

6. That jurisdiction is retained.

Dated at Madison, Wisconsin, _____.

By the Office of the Commissioner of Railroads.

Rodney W. Kreunen
Commissioner of Railroads