

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 Crossings of the Union Pacific Railroad Co. Tracks with 7 Highways in the Town of Somers and the Village of Pleasant Prairie, Kenosha County

9040-RX-1202

FINDINGS OF FACT AND ORDER

The Commissioner of Railroads has directed the staff of the Office of the Commissioner of Railroads (OCR) to investigate the adequacy of warning devices under §195.28, Stats., at seven grade crossings of the Union Pacific Railroad Co. (UP) tracks in the Town of Somers and the Village of Pleasant Prairie, Kenosha County. These crossings are on the railroad's New Line. All seven crossings are listed below.

Road	Municipality	Crossing No.
CTH 'K'	Town of Somers	176 895J / MP 52.33
CTH 'A'	Town of Somers	176 884W / MP 57.4
CTH 'S'	Town of Somers	176 893V / MP 53.85
CTH 'E'	Town of Somers	176 885D / MP 56.4
CTH 'L'	Town of Somers	176 889F / MP 55.36
CTH 'ML'	Village of Pleasant Prairie	176 901K / MP 47.3
128 TH Street (Russell Road)	Village of Pleasant Prairie	176 902S / MP 46.3

An OCR investigator inspected the crossings in June 2005. No hearing was held.

Findings of Fact

THE COMMISSIONER FINDS:

The UP operates 18 train movements per day over each crossing at a timetable speed of 50 mph. Accidents that occur at any of these crossings will likely be quite serious if a through train is involved due to their 50 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+.

CTH 'K' Town of Somers 176 895J / MP 52.33

CTH 'K' is 22' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of about 80°. CTH 'K' carried an average daily traffic (ADT) of 6700 according to 2002 DOT records at a legal speed limit of 35 mph. The crossing consists of one mainline track and one sidetrack.

about 9.11 meaning that the public will receive \$9.11 in safety benefits for each dollar expended.

The crossing is presently protected with cantilevered 12" incandescent automatic flashing lights and advance warning signs. 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. A cantilevered signal is needed for **eastbound traffic only**.

CTH 'E'

Town of Somers

176 885D / MP 56.4

CTH 'E' is about 23' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of 90°. CTH 'E' carries an ADT of 5800 records at a legal speed limit of 35 mph. The corner sight distance is obstructed in the northwest and southwest quadrants.

The exposure factor at this crossing is about 104,000.

Three train-vehicle accidents have occurred at this crossing since 1973. The accidents occurred in 1976 (2) and 1992.

Installing new automatic flashing lights with gates and constant warning time circuitry at the CTH 'E' crossing has a net benefit of about \$1,150,000. The benefit-cost ratio is about 7.65 meaning that the public will receive \$7.65 in safety benefits for each dollar expended.

The crossing is presently protected with 12" incandescent automatic flashing lights. The existing signals are over 25 years old. 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 exposure factor, inadequate sight distance, and projected net benefit.

CTH 'L'

Town of Somers

176 889F / MP 55.36

CTH 'L' is about 23' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of 90°. CTH 'L' carried an ADT of 2500 according to 2002 DOT records at a legal speed limit of 55 mph.

The exposure factor at this crossing is 45,000.

Three train-vehicle accidents have occurred at this crossing since 1973. The accidents occurred in 1981, 1991, and 1998.

Installing new automatic flashing lights with gates and constant warning time circuitry at the CTH 'L' crossing has a net benefit of about \$782,000. The benefit-cost ratio is about 5.52 meaning that the public will receive \$5.52 in safety benefits for each dollar expended.

The crossing is presently protected with 12" incandescent automatic flashing lights. 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 exposure factor, the accident history, limited sight distance and projected net benefit.

CTH 'ML'

Village of Pleasant Prairie

176 901K / MP 47.3

CTH 'ML' is about 22' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of about 45°. CTH 'ML' carried an ADT of 1000 according to 2002 DOT records at a legal speed limit of 35 mph. The tracks run through a cut that obstructs a driver's view down the tracks. In addition, the roadway curves sharply a short distance from the crossing.

The exposure factor at this crossing is 18,000.

Two train-vehicle accidents have occurred at this crossing since 1973. The accidents occurred in 2000 and 2004.

Installing new automatic flashing lights with gates and constant warning time circuitry at the CTH 'ML' crossing has a net benefit of about \$495,000. The benefit-cost ratio is about 3.86 meaning that the public will receive \$3.86 in safety benefits for each dollar expended.

The crossing is presently protected with 12" incandescent automatic flashing lights. 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 exposure factor, the accident history, limited sight distance and projected net benefit.

128TH Street (Russell Road) Village of Pleasant Prairie

176 902S / MP 46.3

128th Street (Russell Road) is about 24' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of about 90°. 128th Street (Russell Road) carried an ADT of 5000 according to 2002 DOT records.

The exposure factor at this crossing is 90,000.

Six train-vehicle accidents have occurred at this crossing since 1973. The accidents occurred in 1985, 1986, 1987, 1992, 1996, and 2004.

Accidents that do occur here will likely be quite serious if a through train is involved due to their 50 mph speed.

The 128th Street (Russell Road) crossing is presently protected with 12" automatic flashing lights with gates and constant warning time circuitry. The existing warning devices are adequate.

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 Funds: The signal materials and installation shall be split as follows: The OCR will use state and federal safety funds to pay 80% of the cost (up to a **maximum public contribution of \$120,000 per crossing**) and the Union Pacific Railroad Co. shall pay the remaining 20% of the cost. Notwithstanding this cap on the public contributions, the UP may recover its proportionate share of its demonstrated actual reasonable and necessary costs. The projects shall be funded in **2007, except for CTH 'A' which shall be funded in 2008 due to budget constraints.**

Conclusion on the Issue

THE COMMISSIONER CONCLUDES:

1. 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 the Union Pacific Railroad Co. with CTH 'A', CTH 'S', CTH 'E', and CTH 'L' in the Town of Somers, Kenosha County. One cantilevered signal is need for CTH 'S'.

2. 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 the Union Pacific Railroad Co. with CTH 'ML' in the Village of Pleasant Prairie, Kenosha County.

3. That in order to adequately protect and promote public safety, it is necessary to maintain the existing warning devices at the crossing of the tracks of the Union Pacific Railroad Co. with 128th Street (Russell Road) in the Village of Pleasant Prairie, Kenosha County.

4. That in order to adequately protect and promote public safety, it is necessary to maintain the existing warning devices at the crossing of the tracks of the Union Pacific Railroad Co. with CTH 'K' in the Town of Somers, Kenosha 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, constant warning time circuitry and other 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 'A'** at-grade in the Town of Somers, Kenosha County by **December 31, 2008** (Crossing No. 176 884W / MP 57.4).

2. That the **Union Pacific Railroad Co.** shall install and maintain 12" LED automatic flashing lights with gates, constant warning time circuitry and other 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 'S'** at-grade in the Town of Somers, Kenosha County by **December 31, 2007** (Crossing No. 176 893V / MP 53.85). The installation shall include **only one cantilevered signal (for eastbound traffic)**.

3. That the **Union Pacific Railroad Co.** shall install and maintain 12" LED automatic flashing lights with gates, constant warning time circuitry and other 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 'E'** at-grade in the Town of Somers, Kenosha County by **December 31, 2007** (Crossing No. 176 885D / MP 56.4).

4. That the **Union Pacific Railroad Co.** shall install and maintain 12" LED automatic flashing lights with gates, constant warning time circuitry and other 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 'L'** at-grade in the Town of Somers, Kenosha County by **December 31, 2007** (Crossing No. 176 889F / MP 55.36).

5. That the **Union Pacific Railroad Co.** shall install and maintain 12" LED automatic flashing lights with gates, constant warning time circuitry and other 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 'ML'** at-grade in the Village of Pleasant Prairie, Kenosha County by **December 31, 2007** (Crossing No. 176 901K / MP 47.3).

6. 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.

7. 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.

8. That the **State of Wisconsin** shall pay 80% of the cost (up to a **maximum contribution of \$120,000**) and the **Union Pacific Railroad Co.** shall bear 20% of the cost of the crossing signal materials and labor. In addition, the **Union Pacific Railroad Co.** shall pay 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. The maximum funding provided by the **State of Wisconsin** may be adjusted to reflect the actual reasonable and necessary cost of the materials and installation. The actual reasonable and necessary costs shall be determined by the **Office of the Commissioner of Railroads** after hearing, if necessary.

9. 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.

10. That jurisdiction is retained.

Dated at Madison, Wisconsin, (February 20, 2006).

By the Office of the Commissioner of Railroads.

Rodney W. Kreunen
Commissioner of Railroads

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