

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

In the matter of the:

Petition of the Union Pacific Railroad Co. for the Closure of the Public Crossing of its Tracks with 20<sup>th</sup> Avenue in the Town of Strongs Prairie, Adams County

9040-RX-1235

FINAL DECISION ON REMAND

By letter dated December 26, 2006, the Union Pacific Railroad Co. filed a petition with the Office of the Commissioner of Railroads (OCR) under §§195.28 and 195.29, Stats., for the closure of the public crossing of its tracks with 20<sup>th</sup> Avenue in the Town of Strongs Prairie, Adams County (crossing no. 179-265A). Commissioner Kreunen had directed the office to set the case for hearing in the matter.

Closing a crossing means that the roadway would be terminated at the tracks and would be permanently closed to public travel.

Jurisdiction: Secs. 195.28 and 195.29, Stats.

Pursuant to due notice, public hearing was held in this matter on April 17 and 18, 2007 in the Town of Strongs Prairie, Wisconsin with hearing examiner Tom Running presiding.

On July 20, 2007, the Office of the Commissioner of Railroads (OCR) issued an order that required the closure of the public crossing of the Union Pacific Railroad Co. (UP) tracks with 20<sup>th</sup> Avenue in the Town of Strongs Prairie, Adams County after October 1, 2007 and before October 10, 2007 (crossing no. 179 265A). The Town of Strongs Prairie filed a petition for judicial review of this decision in Adams County circuit court.

On March 3, 2008, the circuit court for Adams County, The Honorable Charles A. Pollex, determined that the Commissioner of Railroads failed to comply with the standards for issuance of a final decision at variance with the proposed decision. On August 25, 2008, the court expressly invalidated and set aside the final decision and remanded the matter to the Office of the Commissioner of Railroads.

On May 15, 2007, the hearing examiner issued a proposed decision. The remand effectively returns the case to that stage. The Commissioner adopts the proposed decision as final, but adds a requirement that the Town of Strongs Prairie make certain improvements to the roadway approach profile before the automatic flashing lights and gates are installed. This change is explained more fully in the Findings of Fact.

Appearances:

**Parties**

In Support:

Union Pacific Railroad Co  
by  
Mack Shumate  
Senior General Attorney  
101 N. Wacker Drive suite 1900  
Chicago, Illinois 60606

In Opposition:

Town of Strongs Prairie  
by  
John R. Miller, Attorney  
520 Oakridge Drive  
Portage WI 53901

Of the Office Staff:

Tom Clauder, Railroad Investigator

In addition to the parties, eight persons spoke at the hearing. Of these registrants, all opposed the closure.

Findings of Fact

THE COMMISSIONER FINDS:

The Union Pacific Railroad Co. (UP) petitioned the Office of the Commissioner of Railroads for the closure of the public crossing of the UP tracks with 20<sup>th</sup> Avenue in the Town of Strongs Prairie, Adams County. The Commissioner orders that the 20<sup>th</sup> Avenue crossing remain open and that the UP install automatic flashing lights with gates.

UP contracted with the engineering firm TKDA to prepare a report on the merits of a closure of the crossing, labeled "Alternative Access Study" (Exhibit 1).

20<sup>th</sup> Avenue is a north-south roadway that connects STH 21 and CTH J. It is a two-lane roadway 22 feet wide with grassy shoulders. It has a posted speed limit of 45 mph north of the crossing. 20<sup>th</sup> Avenue crosses the UP tracks at about 80 degrees measured in the northwest quadrant. The roadway ascends to the crossing at a 6% grade from the south and a 7% grade from the north. Warning devices consist of two crossbucks, and stop signs mounted on the

same posts. The tracks are level and tangent in the area of the crossing.

The UP operates seven through trains per day over the crossing, at a maximum timetable speed of 49 mph. There are no switching operations in the area. 20<sup>th</sup> Avenue changes its name to Dakota Avenue and turns to the east approximately 1400 feet south of the crossing. A recent traffic count showed an average daily traffic of 300 vehicles per day south of the crossing, and 260 to the north of the crossing.

Due to the proximity of the curve of Dakota Avenue south of the crossing, vehicles can be assumed to be traveling at a slower speed than what is posted. For a 30 mph vehicle, the safe stopping distance is 231 feet from the crossing. The crossing is visible from greater than this distance. From a point 231 feet from the crossing, a driver needs to see a 49 mph train when it is 510 feet from the crossing. The sight distance available in each quadrant is 75 feet in the northeast quadrant, 30 feet in the northwest quadrant, 50 feet in the southeast quadrant, and 90 feet in the southwest quadrant. Stop signs are located at the crossing. Corner sight distances are inadequate in all four quadrants.

Clearing sight distance is the distance down the track that a driver needs to see an approaching train to be able to safely clear the crossing from a full stop. Clearing sight distance is 1000 feet in the northeast quadrant, 800 feet in the northwest quadrant, 1000 feet in the southeast quadrant, and 800 feet in the southwest quadrant. Clearing sight distances are inadequate in all four quadrants.

There has been one accident at 20<sup>th</sup> Avenue since 1973. It occurred in 1975 involving a snowmobile and was a fatality.

Accidents that do occur here will likely be quite serious if a through train is involved due to their 49 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 TKDA report noted the potential for vehicles such as heavy equipment and lowboys to hang up on the crossing due to its steep approach grades. No one, including the Adams County Sheriff, indicated this has ever actually happened at this location. There were no marks on the crossing surface indicating a vehicle scraping the surface.

The report also noted the potential for speeding vehicles to speed through the crossbucks and stop signs at the crossing and become airborne. No one indicated this has ever actually happened at this crossing.

If 20<sup>th</sup> Avenue were closed, an alternate route using either Czech Avenue or Cypress Avenue and CTH Z was suggested. Emergency vehicles responding to the area of the crossing from the Strongs Prairie Sub-Fire Station would be 16 minutes using either route. Hospital routing from the hospital in Friendship is 13 minutes via the existing route, and 17 minutes via the alternate route if the crossing is closed. Concerns about the alternate route involved the inadequate widths of Czech Avenue and CTH Z, and congestion already existing on this route.

There is an electric substation immediately south of the crossing of 20<sup>th</sup> Avenue. The CEO of

the electric cooperative stated that closure of the crossing would increase response time to emergencies in the event of a power outage.

20<sup>th</sup> Avenue provides access to extensive residential and commercial developments. 20<sup>th</sup> Avenue serves a major condominium development, a marina, an 18-hole PGA-style golf course, and a resort hotel. There is extensive residential and commercial construction in the area, either already complete or in development. North Bay Development is immediately north of the crossing. It has an 18-hole golf course, 244 residential units, 124 additional condos, a restaurant and clubhouse. A waterpark is also in development at the northwest quadrant of the crossing. 'Timber Shores by Natterra', in development south of the crossing, has 268 lots, and is closely tied to the North Bay attractions north of the crossing. Zoning conditions for Timber Shores include improvements to the roadway approach grades to the crossing of 20<sup>th</sup> Avenue.

Given the large amount of existing and ongoing development around 20<sup>th</sup> Avenue, closure of this crossing is not reasonable. Adequate alternate routes to 20<sup>th</sup> Avenue do not exist and the crossing is not redundant. The primary access to this area is by CTH Z. Czech Avenue and 20<sup>th</sup> Avenue are the only roadways that access CTH Z from the developed area. Closure of the crossing might have been reasonable before all of the development occurred, but that opportunity is gone. The area simply has far too much development to close off one of the major access routes. Instead of closing the roadway it needs to be improved as the Town plans to do.

The 20<sup>th</sup> Avenue crossing presently has crossbucks and stop signs for warning devices. These warning devices are inadequate. Because of the number and speed of trains, automatic flashing lights with gates are needed to adequately protect public safety.

Before the new warning devices can be safely installed, however, the roadway approaches need to be improved. As noted above, the roadway ascends to the crossing at a 6% grade from the south and a 7% grade from the north. Under current conditions the stop signs alleviate some of the problems caused by the steep grades because vehicles are stopping (or at least slowing down) for the crossing. When the stop signs are removed from the crossing, vehicles traveling on 20<sup>th</sup> Avenue will be at risk of experiencing a severe jolt, possibly losing control or even becoming airborne if the roadway approaches are not improved.

The Town Board adopted a resolution on August 11, 2008 confirming its commitment to modify the approach grades during the 2010 construction season. Those improvements should conform to the profile standards set forth in the Wisconsin Department of Transportation Facilities Development Manual (FDM) in Procedure 17-60-5 "Profile"<sup>1</sup>. Those standards require

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<sup>1</sup> Text of FDM 17-60-5, Profile:

"In order to avoid drivers losing control of their vehicles through "bottoming" or "vaulting", and to avoid low profile vehicles from hanging up on the crossing, the grade or profile of the roadway approaches must match the grade along and across the track. To match the grade along or parallel to the rails, it is necessary to remove the pavement crown. It may also be necessary to tilt or warp the pavement cross sections if there is a grade along the track, or if the roadway is on horizontal curve.

The grade along the center line of the roadway must match the grade across the rails. Thus, where the railroad is on tangent, the roadway grade would be flat. On horizontal railroad curves, the roadway grade would match the superelevation of the track.

WisDOT uses a 2'6" minimum approach section from the field side of the rails in the same plane as the rails, with a maximum deviation from the plane of 3-inches at distances 30-feet from the near rail as shown in Figure 1.

a level roadway surface starting 2'6" of the outside (also called 'near') rail on each approach and a maximum 3" deviation from the plane within 30' of the outside (near) rail. The full text of the standard is set forth in the footnote.

In summary, the closure of the crossing at-grade of the UP tracks with 20<sup>th</sup> Avenue will not promote public safety. The installation of 12" LED automatic flashing lights with gates and constant warning time circuitry and improvement of the roadway approaches are required in order to adequately protect and promote public safety.

#### Ultimate Conclusions on the Issues

##### THE COMMISSIONER CONCLUDES:

1. That the closure of the crossing at-grade of the Union Pacific Railroad Co. tracks with 20<sup>th</sup> Avenue in the Town of Strongs Prairie, Adams County would not promote public safety and convenience.

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 and to improve the roadway approaches.

#### Conclusion of Law

##### THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §§195.28 and 195.29, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

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Figure 1 illustrates this allowable grade variation for the roadway approach to a grade crossing. At multiple track crossings, particularly on higher speed roads, it is highly desirable that all rails be in the same plane. To avoid a rough riding crossing and possible loss of vehicle control, the stair step effect of tracks in different planes must be avoided. Consider negotiating with the railroad to raise tracks in order to achieve this. Lowering tracks is usually not feasible. Also refer to the Standard Detail Drawing entitled "Pavement Details for Railroad Approach" (SDD 13B1).

This 3-inch deviation from the plane is derived from an empirically developed "comfort factor" formula for the driver that has been an AASHTO and AREMA standard for many years. This maximum 3" deviation avoids "vaulting" or "bottoming" that divert a drivers attention, or worse, cause a loss of vehicle control." (Formula omitted.)

The FDM may be accessed on the DOT's extranet at <http://roadwaystandards.dot.wi.gov/standards/fdm/index.htm> Free registration is required.

Order

THE COMMISSIONER ORDERS:

1. That the petition of the **Union Pacific Railroad Co.** to close the crossing is hereby **denied**.
2. That the **Town of Strongs Prairie** shall improve the profile of the roadway approaches in accordance with the Wisconsin Department of Transportation Facilities Development Manual (Chapter 17-60-5) to the crossing at-grade of **20<sup>th</sup> Avenue** with the Union Pacific Railroad Co. tracks in the Town of Strongs Prairie, Adams County by **October 31, 2010** (crossing no. 179 265A).
3. 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 **20<sup>th</sup> Avenue** at-grade in the Town of Strongs Prairie, Adams County by **December 31, 2010**.
4. 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.
5. 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.
6. That the Union Pacific Railroad Co. shall bear no part of the cost of the crossing signals installation, except 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.
7. That jurisdiction is retained.

Dated at Madison, Wisconsin, (September 12, 2008).

By the Office of the Commissioner of Railroads.

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Roger Breske  
Commissioner of Railroads