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**Office of the Secretary**

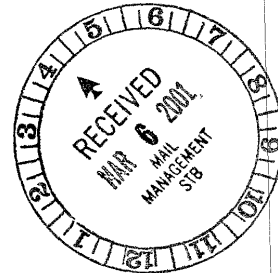
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February 13, 2001

2004 Summit Drive, NE  
Rochester, MN 55906

Office of the Secretary  
Case Control Unit  
STB Finance Docket No. 33407  
Surface Transportation Board  
1925 K Street, NW  
Washington, DC 20423-0001



To Whom It May Concern:

I am writing in response to the Environmental Impact Statement (EIS) issued by the Surface Transportation Board earlier this year regarding the proposed expansion of the DM&E railroad. I am particularly concerned with the section of that statement that describes the impact of the proposal on southeastern Minnesota, including Rochester.

I am a cardiologist with particular expertise in the care of heart attacks. I hold major positions in both the American Heart Association and the American College of Cardiology, the two major national professional organizations in cardiology.

I believe that the Environmental Impact Statement has two major deficiencies:

1. **The EIS does not give adequate attention to the impact of the DM&E proposal, particularly option R-2 for Rochester, on emergency medical care.** As indicated on page G-10 in Appendix G, the critical parameter to assess the impact on emergency vehicles is the "total daily blocked crossing time" for intersections. Despite the fact that this parameter and its importance are described in Appendix G, it is barely mentioned elsewhere in the document. For example, it does not appear on any of the following tables from Appendix G:

Table 3-MN-G33  
Table 3-MN-G34  
Table 3-MN-G35  
Table 3-MN-G36  
Table 3-MN-G37  
Table 3-MN-G38

The total blocked crossing time is only listed in Table 5.1-6. In that table, it is only computed for shorter trains and is not compared to the current situation. On the basis of the data provided in the tables listed above, the daily blocked crossing time can be computed for the current situation, as well as for the R-2 option for 100 MNT (37 trains per day). These calculations are as follows:

current (from Table 3-MN-G37, 12 x 4.1) = 49.2 minutes/day.

100 MNT, length 6400 feet (from Table 3-MN-G37, 37 x 2.1) = 77.7 minutes/day, **a 58% increase**

100 MNT, length 7400 feet (from table 3-MN-G38, 37 x 2.4) = 88.8 minutes/day, **an 80% increase**

These calculations are very sensitive to the assumptions used in Tables 3-MN-G33 to G38. In particular, those tables assume that there are 12 trains currently, which there are not. They also assume that the constant for gate crossing (page G-2) is 30 seconds. This assumption implies that the total time that the intersection is blocked while the warning lights come on, the gates come down, and then the gates go up is only 30 seconds. This does not pass the "common sense" test; it would appear to be an underestimate. I have personally timed this at 2 different intersections, for which it measured >40 seconds; if 40 seconds was used in the above calculation, total daily blocked crossing time would increase under the R-2 option by an additional  $(37-12)/6$ , or 4.2 minutes. If more realistic, i.e., lower, estimates were also used for the current number of trains, the total daily blocked crossing time will probably increase by at least 100%. In other words, **the impact of option R-2 will be to double the current delays of emergency vehicles.**

Such delays will have a very adverse public health impact, not just on ambulances, but also on the ability of emergency medical personnel to reach the hospital. Rochester is clearly the largest city along the proposed expansion route with the largest hospital and the largest number of ambulances. However, these obvious facts ignore crucial, **unique** aspects of Rochester which are never mentioned in the report and constitute its second major deficiency.

2. **Rochester has a unique emergency cardiac care system which is among the very best in the world.** Its quality and uniqueness is based on two new, high technology developments in emergency cardiac care which are of proven scientific benefit and were never anticipated or imagined when railroads were first built. These are as follows:

- a. **Automatic external defibrillators.** The city of Rochester has pioneered the use of automatic external defibrillators. Approximately 225,000 Americans die each year from sudden cardiac arrest. The survival rate for cardiac arrest victims in major cities is as low as two percent. The average national survival rate is about five percent. The survival in the city of Rochester of such patients is between 40-50 percent, eight-ten-fold higher than the national average.<sup>1</sup> This reflects the use of automatic external defibrillators (AEDs) by all police officers, firemen, and ambulance personnel. Whomever gets to the victim first uses an AED to administer a life-saving electric shock. **Time is critical.** In the Rochester experience (which is summarized not only in the medical literature but on the Rochester Police Department web page; <http://www.ci.rochester.mn.us/police/defibl.htm>), the average time to first shock in those patients who survive is 5.8 minutes; the average time to shock in those patients who die is 6.4 minutes. **This is only a 36-second difference.**<sup>1</sup>

The value of AEDs is now widely recognized. Former president Bill Clinton devoted his weekly radio address on May 20, 2000, to these devices. As he said in closing, "It is now our

responsibility to bring this technology, this modern miracle, to every community in America.”<sup>2</sup> Congress subsequently passed the “Cardiac Arrest Survival Act,” which President Clinton signed into law on November 13, 2000. This mandates that the administration develop a plan to increase AEDs in buildings owned or leased by the federal government. A companion bill, the Rural Access to Emergency Devices Act, authorizes \$25 million in federal funds to help rural communities add AEDs to their emergency response system. Consider this simple paradox—Congress is trying to install these devices in rural communities to save lives, while the EIS for the DM&E railroad proposal does not even mention these devices or the adverse impact that this proposal will have on the use of these devices in Rochester.

Automatic external defibrillators are now in use on American Airlines, and in most large casinos in the states of Nevada and Mississippi. Recent reports in the *New England Journal of Medicine* demonstrate their effectiveness in saving lives in these locations.<sup>3,4</sup> In September 2000, the FAA mandated that all major airlines must install these devices on their planes within the next 12 months. The critical importance of speed in the use of AEDs is clear. In the study involving casinos, the survival rate was 74 percent for those who had their first shock within three minutes, and only 49 percent for those who received their shock after three minutes.<sup>4</sup> In an accompanying editorial in the *New England Journal of Medicine*, Rosemarie Robertson, the President of the American Heart Association, said “It has now been demonstrated that increasing the number of automated external defibrillators in a community by equipping police with the devices and training officers to use them can reduce the time for defibrillation and increase survival rates...Police officers were as effective as emergency-medical services personnel in delivering this essential initial therapy, and shortening the time to defibrillation by as little as one minute improves the rate of survival to hospital discharge.”<sup>5</sup> The reference cited from the medical literature in support of this quotation is a research report from Rochester, Minnesota.

In summary, Rochester has pioneered the use of AEDs. It is a model for the rest of the country. No other city along the proposed DM&E route currently has AEDs. The DM&E railroad proposal will increase the time to first defibrillation whenever a train “gets in the way” of a police car, fire truck, or ambulance who would have gotten to a cardiac arrest victim first. An increase of 36 seconds, which is likely on the basis of the “total daily blocked crossing time” calculations, will cost a human life.

- b. **Mayo Clinic has been a national and international leader in the use of primary percutaneous transluminal coronary angioplasty (PTCA—the balloon procedure) in the treatment of heart attack.** Saint Marys Hospital in Rochester is the only hospital along the proposed DM&E route that provides this service. This service improves the care of patients from throughout southeastern Minnesota, not just from the city of Rochester, who are sent on an emergent basis to the hospital. PTCA is better than thrombolytic therapy (the “clot buster” drug) in treating heart attacks. It saves more lives, and Mayo has contributed to the scientific literature that proves this.<sup>6</sup> However, it is only available in about 20% of U.S. hospitals. It requires a team of four individuals, not just a physician, to get to the hospital as soon as possible. Time is once again critical. A delay of even a minute may make a difference. Multiple hospitals from around the world have published scientific articles describing their own experience with respect to the time delay from a patient’s arrival at the hospital to the performance of PTCA to reopen a

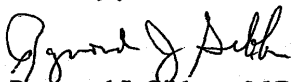
blocked artery that has caused the heart attack. The time delays published by the Mayo Clinic from the Saint Marys Hospital experience are among the shortest in the world. They reflect the small size of the city of Rochester, an excellent hospital system, and the absence of traffic delays when the emergency response team of four individuals drives to the hospital. Optional R-2 of the DM&E proposal will worsen these response times, which are currently the envy of the rest of the world. Once again, this proposal will cost lives.

In summary, the EIS for the DM&E railroad proposal is deficient. It has not adequately addressed the impact of the DM&E railroad proposal on emergency care. It has failed to detail the adverse effect on "total daily blocked crossing time." It has failed to consider the two unique features of the city of Rochester detailed above, the use of AEDs to treat cardiac arrest and the use of PTCA to treat heart attacks. **The citizens of Rochester and southeastern Minnesota benefit from one of the best emergency cardiac care systems in the world. It is unmatched by any city along this route. The DM&E railroad proposal will have an adverse impact on this system. There is no doubt that it will cost human lives.** The only uncertainty is just how long it will take for a train to get in the way of a police car going to a cardiac arrest victim, or one of the emergency medical personnel responding to the hospital to perform PTCA on a heart attack victim.

Whoever makes the decision to approve Option R-2 for Rochester of the DM&R railroad proposal must accept responsibility for the lives that will definitely be lost. As a physician who practices in Rochester, who participates in this emergency system, and who has spent more than 10 years of his life on research trying to improve the care of heart attack victims, I would not want that responsibility. I have taken the time to detail my criticism of the EIS to make certain that the decision-making process adequately considers the adverse impact of the DM&E proposal on the preservation of human life.

Thank you for your review of this letter.

Sincerely yours,

  
Raymond J. Gibbons, M.D.

RJG:sps

#### References

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