ATTACHMENT 2 – LETTER TO THE NATIONAL TRANSPORTATION SAFETY BOARD FROM THE MINNESOTA DEPARTMENT OF TRANSPORTATION DATED APRIL 22, 2008

(3 pages)

Minnesota Department of Transportation

Office of Bridges & Structures
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Daniel Walsh
National Transportation Safety Board
Office of Highway Safety
624 Six Flags Drive
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Subject: Response to Questions Regarding NBIS Condition Ratings

Dear Mr. Walsh:

The following are responses to your questions in the email dated April 14, 2008.

1) **Question:** The NBIS condition ratings are reported every year since 1983. If Mn/DOT conducted bridge inspections on a 2 to 3 year cycle from 1983 through 1995, what data was used to submit to FHWA to support the condition ratings on an annual basis?
Response: The bridge inspection reports indicate that the bridge was inspected annually from 1983 to 1995.

2) **Question:** Is it factually correct to say that Mn/DOT conducted bridge inspections on a 2 to 3 year cycle from 1983 through 1995? (For instance, on the 1/31/89 Mn/DOT bridge inspection report, the inspection box in the lower left hand corner indicates dates of 7/7/87, 6/19/88, 8/5/89, and 1/31/89).
Response: No. Inspections were conducted each of the years shown at the bottom of the page. The same form was used each year for up to four years, then a new form was used. Four years of annual inspections could be recorded on one page. As stated above, the bridge was inspected annually from 1983 to 1995.

3) **Question:** Is the data contained in the NBIS condition ratings (deck rating, superstructure rating, substructure rating, sufficiency rating, and status) information supplied by the state? What is the procedure for reporting the data to FHWA?
Response: The deck, superstructure, and substructure ratings are supplied by the state annually. FHWA computes the sufficiency rating and deficient status. FHWA requires a data submittal to be a text file in a specified format. Each bridge has at least one row of data in the text file. Only the most recent inspection data is reported. The 1995 "Recording and Coding Guide for the

Structure Inventory and Appraisal of the Nation's Bridges" contains the record format of the text file in Appendix E.

4) **Question:** Please explain the following discrepancies on the NBIS condition ratings. Why did the superstructure condition rating increase from 7 to 8 in 1989?
Response: Most likely an error on Mn/DOT's part in creating the FHWA data file produced the 8. Our inspection records incorrectly show "N" for superstructure in the 1988 inspection.

Question: Why were no values submitted for the condition ratings in 1999?
Response: We were using Brinfo bridge inspection software at that time. The Sept 11, 1998 inspection data stored in Brinfo had deck=5, super=4, sub=6. Brinfo did not transfer that information correctly into the 1999 FHWA data submittal file, it transferred blanks instead. Brinfo was discontinued in year 2000 due to frequent data errors and unreliability. Pontis has been used to store inspection data and create the FHWA submittal file since 2000.

Question: Why did the sufficiency rating increase from 49 to 76 in 1999?
Response: Our 1999 FHWA submittal did not include the condition ratings for this bridge. FHWA submittal requirement does not include sufficiency ratings. They compute the sufficiency rating using their own software. We assumed that in the absence of deck, superstructure, and substructure condition data, the sufficiency rating is computed using 6 for deck, superstructure, and substructure, thereby producing a higher SR than actual conditions would produce. We confirmed this by entering a 6 for deck, super, and sub; and the SR went from the most recent value of 50, to 73.

5) **Question:** What are the requirements for a bridge to be inspected if it is classified as structurally deficient and fracture critical (time interval and reporting process)?
Response: NBIS inspection requirements set a maximum routine inspection interval of 2 years for all bridges (the 2005 rule change stated that the interval be 24 months). Minnesota policy requires fracture critical or structurally deficient bridges to have routine inspections annually, meaning once per calendar year.

Sincerely,

Daniel L. Dorgan
State Bridge Engineer