



New Jersey

Department of Transportation

Technical Advisory

I-35 BRIDGE COLLAPSE—RECOMMENDATIONS
FOR EVALUATION OF GUSSET PLATES ON
FRACTURE CRITICAL BRIDGES

The NTSB Report and FHWA Technical Advisory both dated January 15, 2008 have been published as a result of the subject bridge collapse. The NTSB Report provides a thorough evaluation of the causes of the collapse and the FHWA Technical Advisory makes certain recommendations to reduce the possibility that future similar collapses could occur. Copies of these documents are provided as attachments to this Technical Advisory.

The Department feels that the recommendations in the FHWA Technical advisory do not adequately address the potential situations where similar problems could occur. In particular, we do not consider there to be any significant difference between gusset plates and splice plates in Fracture Critical Members (FCM's). We also do not believe that the only FCM's that require particular attention are steel truss bridges. We feel that all FCM's with gusset plates or splice plates should be evaluated when changes in dead load or other structural modifications have occurred. In addition we believe that gusset/splice plates should be evaluated when considering permit loads on FCM's

Therefore, we make the following recommendations:

- You should revise your design procedures to include the check of the capacity for gusset plates and splice plates on fracture critical members when dead load and/or permit live load is added to a structure that could result in increased stresses.
- You should revise your load capacity rating procedures to include the check of the capacity for gusset plates and splice plates on fracture critical members where dead load has been previously been added to a structure and/or permit live load that could result in increased stresses. Revised load capacity ratings should be made during the next routine inspections of the affected bridges. For those owners whose bridges are inspected through NJDOT contracts, no action on your part is required to accomplish this recommendation.

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1/17/08