

INTER OFFICE MEMORANDUM

DATE: June 8, 1994

TO: Mr. Roger Almond, Deputy Director and Chief Engineer
FROM: Robert L. Walters, Assistant Chief Engineer - Design
SUBJECT: Bridge Railing

Concerns have arisen recently about bridge rails on structures to be retained on construction projects.

Current AASHTO Bridge Specifications require a bridge rail to be satisfactorily crash tested or meet specific AASHTO design requirements. The simplest of these acceptable rails appear to be 1) The concrete New Jersey Shape and 2) Texas T-101 metal rail.

In mid 1977 the Department switched to New Jersey rail. Many bridges exist on City/County routes and State secondary routes which have the old style plate guard railing. In addition, some bridges built after 1977 by counties (mostly precast) have plate guard railing. The plate guard railing does not meet the current AASHTO criteria.

Minute Order 74-644 recognized the situation with bridge railing not meeting impact load requirements. M. O. 74-644 allows the use of plate guard railing on State funded projects where the ADT is less than 750.

Based on this information, I recommend the following procedure for State funded projects on non-NHS routes and on County State-aid projects where current ADT is 750 or less:

1. Where the bridge is otherwise structurally and functionally adequate and the rail is not deteriorated, retain the existing plate guard bridge railing.
2. Approach guard rail will meet current standards and will connect to the bridge rail.
3. When the subject bridge is replaced or rehabilitated, the bridge railing will be brought up to current standard.

Your concurrence in this approach is hereby requested.

Concur:

Roger Almond
Deputy Director
And Chief Engineer

November 27, 1974

The following is the record of the proceedings of the eleventh regular meeting of 1974 which was held by the Arkansas State Highway Commission in Little Rock, Arkansas on November 27, 1974. The following members were present:

W. Maurice Smith, Jr., Chairman
Lawrence Blackwell, Vice Chairman
J. C. Patterson, Member
George Kell, Member
James A. Branyan, Member

74-644

WHEREAS, "The Standard Specifications for Highway Bridges", Eleventh Edition, 1973, adopted by the American Association of State Highway Officials, is the governing design specifications for all State Highway bridges, and

WHEREAS, these specifications contain certain design load requirements for bridge railings; and

WHEREAS, prior to 1964 plate guard bridge railing was used extensively on bridges in Arkansas; and

WHEREAS, this plate guard bridge railing has given satisfactory service;

NOW THEREFORE, it is hereby declared that the design policy of the Arkansas Highway Department will deviate from "The Standard Specifications for Highway Bridges" to the extent that plate guard bridge railing is considered as meeting of the design requirements for a satisfactory bridge railing on State financed projects which have less than 750 current average daily traffic.