

NEW MEXICO STATE HIGHWAY
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February 23, 1994

Mr. Reuben S. Thomas, Division Administrator
Federal Highway Administration
New Mexico Division
604 W. San Mateo Road
Santa Fe, New Mexico 87501

Attention: Robert Mihalek

Subject: 4-year Bridge Inspection Interval
Resubmission for Culverts in New Mexico

Submission of the program to increase the inspection frequency for culverts in New Mexico for on-system and off-system structures follows. Corrections made per message from Jerry G. Jones-FHWA, Feb. 18, 1994. A computer printout of the culverts that meet the following criteria is attached. The format for the following is indicated in FHWA Technical Advisory T 5140.21.

- 1) Structure type and description.
 - a. Concrete box culverts with 15 ft maximum span.
 - b. Metal culverts with 10 ft maximum span.
 - c. No structure will exceed a 100 ft span.
- 2) Structure age.
 - a. Ages range from 1 year to over 60 years.
 - b. Many of these structures that are over 50 years old are in good condition (rating of 7 for culvert condition).
- 3) Structure load rating.
 - a. All load ratings have operating ratings above the state legal load of HS-17.
- 4) Structure condition and appraisal ratings.
 - a. All culvert condition ratings are greater than condition rating 5.
 - b. All channel condition ratings are greater than condition rating 5.
 - c. Appraisal ratings are listed.
- 5) Volume of traffic carried is listed. ADT ~~200,000~~ ^{FHWA 5/94 59,000} will be an acceptable criteria for the limiting traffic volume.
- 6) ADTT is listed.

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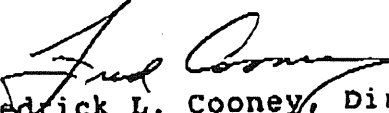
- 7) Major maintenance or structural repairs performed within the last 2 years.
 - a. All culverts that are marked with a "*" on the computer listing have been widened or built within the last 2 years. These culverts will be inspected within 2 years and if the culvert and channel condition ratings remain above 5 a 4-year inspection interval will be implemented for these culverts.
- 8) An assessment of the frequency and degree of overload that is anticipated on the structure.
 - a. All of these culverts have very short spans.
 - b. All of these culverts have fill cover over the top of the culvert which distributes the live load over the load bearing structure. Any overload that is permitted by the 1993 New Mexico Bridge Weight Limit Map will not produce stresses high enough to cause permanent deformations.
 - c. The frequency of overloads is very seldom for these culverts.
- 9) A discussion of failure experience, maintenance history and latest inspection findings for the group of structures identified.
 - a. Failure experience
 - i. A structural failure has never occurred in New Mexico on the type and size of culvert listed.
 - b. Maintenance history
 - i. Scouring of the channel has been a problem area in isolated instances. Drop inlet structures have had to be constructed. In the event that the channel is scouring the channel rating will be 5 or less and the inspection frequency will be changed to a 2-year of more frequent interval until the problem is resolved.
 - ii. These culverts perform year after year with little or no maintenance. It is fairly uncommon to require any maintenance on culverts with the channel or culvert ratings greater higher than 5.
 - iii. In the event of flooding or natural disaster, the culverts will be scheduled for an inspection.

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- c. Latest Inspection Findings
 - i. Inspection findings show that a change in the condition ratings for these culverts is quite uncommon.
 - ii. The New Mexico Highway and Transportation Department currently takes responsibility to inspect all bridges in New Mexico that meet the NBIS for both on & off system roads.
- 10) The Proposed Inspection Interval
 - a. 4-years as listed.

If you have any questions or need more information, please call Jimmy D. Camp at (505)827-5564. Let us know of your decision with reference to this request.

Sincerely,


Fredrick L. Cooney, Director
Engineering Operations Division

FLC:JDC:jc

pc: Jimmy D. Camp