Montana Department of Transportation
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Memorandum

To: Distribution

From: Dwane Kailey, P.E.
Acting Chief Engineer
Highways & Engineering Administrator

Date: January 5, 2012

Subject: Concrete Barrier Compliance

The information contained in this memo supersedes all previous guidance concerning the criteria for the replacement of the old 2-loop concrete barrier. In a letter dated December 2, 2011, FHWA stated that all existing 2-loop concrete barrier, including tall wall barrier, which must be moved for any reason during construction, must be replaced with NCHRP 350 compliant concrete barrier. This directive includes barrier that would be moved temporarily to perform paving and replaced in its original location. FHWA has also stated that salvaged 2-loop barrier may not be used on Federal-aid highway projects for temporary or permanent installations.

FHWA has taken this position for the following reasons:

- The 2-loop concrete barrier was never tested for NCHRP 230 compliance
- The woven wire loop connections, which are used on much of the existing barrier, have exhibitted damage and deterioration which can significantly reduce the strength of the connection.

Additionally, MDT has detected severe corrosion in the loop connections in a substantial amount of concrete barrier on Interstate 90 in the vicinity of Lookout Pass.

In an effort to enhance the safety of the traveling public as well as comply with FHWA policy, MDT has proposed a research project with the following objectives:

- Inventory the existing concrete barrier

  This information will identify the locations and overall quantity of concrete barrier. It will aid in defining the extent of the research necessary to determine the corrosion potential for barrier in different geographic locations. It will also help gauge potential cost to MDT.

- Analyze the corrosive nature of the loop/connector system

  This information will help identify which conditions are most conducive to corrosion and how rapidly corrosion occurs under various conditions. Ideally, it

will also identify which pretreatment method for the connector loops is most cost-effective.

- Develop a transition plan for the eventual replacement of all existing 2-loop concrete barrier.

  This plan will prioritize the replacement of concrete barrier based on corrosion problems, crash history and traffic volumes. It will also include an appropriate maintenance strategy for both the 2-loop barrier and the new 3-loop barrier.

If you have questions concerning this, please contact me at 444-6414.

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