Pickering, John

From: Pickering, John
Sent: Tuesday, February 11, 2003 4:27 PM
To: Carr, Mitch
Cc: Carr, Barry K.; Reeves, Steve; Purvis, Keith
Subject: Sidewalks on Bridges

Mitch --
I can not remember discussing this issue with Harry Lee or not; however, I have investigated what some other states are doing regarding sidewalks on bridges. During some AASHTO meetings I have attended, where miscellaneous items are brought up for discussion, I have asked other State DOT's how they design their sidewalks on bridges. I asked them if they were placing a traffic barrier between the traveled way and the sidewalk on the bridge, and the answer I have gotten is, no. I'm not saying all the other DOT's answered my question, I'm just saying the ones that did answer, said no, they are not placing a traffic barrier between the traveled way and the sidewalk.

It has come to my attention, on the project on SR 178 in New Albany over Little Tallahatchie River in Union County, the bridge is being designed without a traffic barrier between the traveled way and sidewalk. This particular bridge has extra width on it -- I believe it has an extra 12-ft. turn lane plus a 10-ft. shoulder in front of the raised sidewalk.

There is a project on US 51 in Pike County in the Town of Magnolia that has a sidewalk on it. I understand the bridge has already been designed using the traffic barrier between the traveled way and sidewalk on the bridge.

The issue of whether or not to have a traffic barrier between the travel way and the sidewalk is one that I think needs addressing. I have summarized what the 2001 AASHTO Green Book and the 2002 AASHTO Roadside Design Guide say regarding this issue on the attachment.

If you notice, I did not copy Harry Lee or Wendel with this email; however, it may be necessary for them to get involved, especially since any changes to the MDOT's normal guidelines can have some disadvantages.

Please give me a call so we can set up a time to meet regarding this matter.

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SIDEWALKS ON BRIDGES
What Does AASHTO Say?
By John B. Pickering
February 11, 2003

From the 2001 AASHTO Green Book - *A Policy of Geometric Design of Highways and Streets*, Page 363 --

- *Provisions for pedestrians are often appropriate on street overcrossings and on longer bridge crossings. On lower-speed streets, a vertical curb at the edge of the sidewalk is usually sufficient to separate pedestrians from vehicular traffic. Continuity of curb height should be maintained on the approaches to and over structures. For higher-speed roadways on structures, a barrier-type rail of adequate height may be used to separate the walkway and the traveled way. A pedestrian-type rail or screen should be used at the outer edge of the walkway. On long bridges (greater than 200 feet), a single walkway may be provided. However, care should be taken to ensure that approach walkways provide safe and relatively direct access to the bridge walkway. Fences may need to be erected to channelize pedestrians and prevent or control conflicts between pedestrians and vehicular traffic.*

From the 2002 *AASHTO Roadside Design Guide*, Page 10-5 --

- *When a bridge also serves pedestrians, a barrier to shield them from vehicular traffic may be warranted. Placement of the bridge railing between traffic and the sidewalk affords maximum pedestrian protection. A pedestrian railing would then be needed at the outer edge of the bridge structure. The need for a bridge railing adjacent to the pedestrian walkway should be based upon the volume and speed of the roadway traffic, lane width, curb offset, and alignment. Other considerations include the number of pedestrians crossing the bridge, the crash statistics (if available), and the conditions on either end of the structure. The use of a bridge railing may create a problem unless the railing is terminated in an acceptable manner. Flaring the end section away from the roadway is often not practical because it would encroach upon the sidewalk, requiring the walkway to meander around the transition section and terminal unit.*

From the 2002 *AASHTO Standard Specifications for Highway Bridges* --

- I could not find anything regarding the guidelines for placing a barrier between the traveled way and the sidewalk on bridges, other ~~than~~ than general features, such as height of rail.