

**Pickering, John**

**From:** Pickering, John

**Sent:** Monday, May 06, 2002 11:37 AM

**To:** Stokes, Freddy

**Cc:** Wallace, Ken; Foster, David; Reeves, Kent; Clark, Tim; Jackson, Terry; Reeves, Steve

I visited District Five on September 27, 2001 regarding the quality of Roadway plans being provided for construction projects. Attendees were as follows:

- John Pickering of Roadway Design Division
- Freddy Stokes of District Five
- Kent (Rocky) Reeves from Meridian Project Office
- Terry Jackson from Carthage Project Office
- Tim Clark from Philadelphia Project Office

One item brought up during the meeting concerned extending an existing box culvert. My notes of the discussion are as follows:

**SR 19 South of Meridian --**

- **Extending an existing box culvert** – *There was much discussion regarding this subject. Roadway Design already has (included with this project) a standard for extending box culverts. This project actually said to remove 2' of the existing box. The removal of 2' (perpendicular) could not be done due the undermining of the roadway pavement; therefore, the District removed the headwalls and apron at a skew. The existing standard (including the collar) works fine for a box that had the wings poured separately, where the steel can be cut. The problem is where box culverts have the headwall poured together with the box. With this situation, the removal of the headwall produces a jagged edge for the extension; therefore, the expansion material is a problem. The discussion centered on whether or not to remove the concrete and leave the steel exposed for the extension. I gathered there was not a consensus regarding this, and they questioned whether the collar was needed with this situation.*

Steve Reeves, of Roadway Design Division, has investigated the way the plans are developed for extending an existing box culverts. His investigation is summarized in a letter to me as follows:

*I talked with Brad Lewis and Leroy Crisco of the Construction Division about extending box culverts. I also talked to Kent Reeves, Meridian Project office, and Jessie Stewart, District 2 headquarters.*

*Mr. Luckett has been placing the following note on his box extensions: "Remove parapet, wings and apron. Expose 18" of steel in barrel to tie*

*extension steel to. Extend using full collar.” The problem comes in the field when they try to expose the 18” of steel. Either cracks occur in the barrel, which Mr. Jessie Stewart says is probably caused by using to large a jackhammer, or leaks appear at the joint. Mr. Kent Reeves also has a problem with the expansion material required with the full collar details. He said the expansion material would bridge the rough face and leak. Mr. Lewis and Mr. Crisco said that the expansion material was not supposed to go on the rough face to begin with.*

*Mr. Lewis and Mr. Crisco were of the same opinion on extending box culverts and Mr. Stewart had no problems in District 2 that he knew of. The final consensus between Mr. Lewis, Mr. Crisco and myself was that our note would call for the removal of parapet, apron and wings and require a full collar. The steel would not be exposed and the collar steel would not be tied in with the existing box. This configuration would then work similar to our construction joints allowing the expansion and contraction movements in box. Mr. Lewis said he would explain to the project engineers that the expansion material does not go on the rough face of the walls.*

Thanks for bringing this to our attention, and hopefully, the problem has been solved.

**John B. Pickering**

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