

**RESEARCH PROBLEM STATEMENT**

<b>DATE:</b> 09/06/2019	<b>PROJECT AREA:</b> Design
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**TITLE:** Implementing MASH Standards for ARDOT Bridge Barriers

**PROBLEM STATEMENT:**

The AASHTO Manual for Assessing Safety Hardware (MASH) is superseding NCHRP Report 350. The new safety standards will affect bridge barriers beginning in 2020. MASH requires standardized crash testing of barriers to ensure a level of safety that reflects the size and weight of current vehicles. As such, Arkansas must ensure that bridge barriers are compliant with the new crash test regulations. This will involve testing current designs with new crash test vehicle sizes.

**OBJECTIVES:**

1. Determine what bridge barrier designs are used around the state, especially in new construction
2. Determine what crash test loads are available for these designs and where they are deficient relative to new MASH standards
3. Perform detailed finite element modeling simulating crash tests on the barriers from parts 1 and 2
4. Construct full-scale barriers for crash testing to assess the deficiencies identified in part 2
5. Certify existing barriers to MASH standards and/or provide new recommendations on the best practices in bridge barrier design

**FORM OF RESEARCH IMPLEMENTATION AND RETURN ON INVESTMENT:**

This work will ensure that Arkansas bridge barriers are in compliance with current federal regulations and also provide recommendations for any changes or improvements to the current designs.

**Estimated Project Duration:** 24 Months

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**REVIEWER:**

Standing Subcommittee  
Ranking

Advisory Council  
Ranking

Statement Combined with  
Statement Number(s)