TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Nebraska Department of Roads

INSTRUCTIONS:
Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)*	**Transportation Pooled Fund Program - Report Period:**
TPF-5(193) Supplement #106	☐ Quarter 1 (January 1 – March 31) ☐ Quarter 2 (April 1 – June 30) ☐ Quarter 3 (July 1 – September 30) ☑ Quarter 4 (October 4 – December 31)

Project Title:		
Top Mounted Socket for Weak Post Bridge Rail		
Name of Project Manager(s):	**Phone Number:**	**E-Mail**
Reid, Faller, Bielenberg, Lechtenberg, Rosenb	402-472-9324	srosenbaugh2@unl.edu
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
2611211135001	RPFP-17-MGS-2	10/1/2016
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**
9/30/2019	9/30/2019	0

Project schedule status:

☑ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
$161,926	$0	0%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
	$0	

Project Description:

Curbs located along roadways can adversely affect the interaction of errant vehicles with roadside barriers. Although the two are commonly used in combination, when curbs are placed near guardrail systems, the propensity for vehicle underride, override, and instability increases. The MGS with a curb offset 6 in. from the front face of the guardrail was successfully crash tested to NCHRP Report No. 350 TL-3 requirements. However, the MGS with curb has not yet been evaluated to MASH TL-3.

Thus, the objective of this research is to evaluate the performance of the MGS installed with the face of the rail offset 6-in. from the face of the 6-in. tall AASHTO Type B curb. The evaluation of the barrier system behind curb will be undertaken according to the MASH TL-3 safety criteria through two full-scale crash tests with both the 1100C and 2270P vehicles.

Objectives / Tasks:

1. CAD Details
2. Construction of test article
3. Full-Scale Testing - MASH 3-10
4. Full-Scale Testing - MASH 3-11
5. Data Analysis
6. System Removal
7. Summary Report
8. TF13 Hardware Guide Drawings
9. FHWA Eligibility Letter

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

This project is waiting for the testing results of a related project - TPF-5(193) suppl. #105: Testing of the MGS Omitted Post with Curb. The omission of a post is thought to increase the risks of vehicle instabilities and possible capture issues. Thus, it was deemed the more critical of the system installations. If the MGS with Omitted post with curb is successfully tested, this project will likely not be necessary as an FHWA eligibility letter may be obtained for standard MGS with curb. However, if there is a failure during the evaluation of the omitted post installation, this project will become active.

Anticipated work next quarter:

Waiting for results of TPF-5(193) suppl. #105: Testing of the MGS Omitted Post with Curb.

Significant Results:

Objectives / Tasks:	% Complete
1. CAD Details	0%
2. Construction of test article	0%
3. Full-Scale Testing - MASH 3-10	0%
4. Full-Scale Testing - MASH 3-11	0%
5. Data Analysis	0%
6. System Removal	0%
7. Summary Report	0%
8. TF13 Hardware Guide Drawings	0%
9. FHWA Eligibility Letter	0%

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

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Potential Implementation:

The successful testing and evaluation of the MGS guardrail system offset from a 6-in. tall Type B curb would provide state DOTs with a MASH-tested option to install curb adjacent to the MGS. Evaluation of the MGS with curb will allow state DOTs to continue to use this hardware on their roadways and will ensure that its safety performance remains adequate with respect to the current vehicle fleet.