

Project Title:	Determine MASH TL-3 and/or TL-2 compliance of the Midwest Guardrail System (MGS) with half post spacing / quarter post spacing and in combination with no soil backup.
Project Synopsis:	<p>Previous research has indicated MASH compliance of MGS guide rail with reduced post spacing. Previous research has also provided MASH compliant MGS guide rail with posts located on slopes steeper than 2:1.</p> <p>This research is to look at the combination of MGS guide rail with reduced post spacing and a lack of soil backup, i.e. posts located on slopes or slopes steeper than 1V:2H.</p> <p>The goal would be to first evaluate this combination for MASH TL-3. If project resources allow, simulations would evaluate deflections at lower speeds (45mph and/or 25 mph).</p>
Project Goal(s):	Determine MASH compliance and deflections of MGS guide rail with reduced post spacing and no soil backup. Possibly also investigate TL-2 deflections.
Project Background:	A report was recently completed on MGS guide rail with half post spacing / quarter post spacing. This problem statement is a follow-up to that regarding what deflections would be when combined with no soil backup.
Proposed Work Plan:	<ol style="list-style-type: none"> 1.) Task 1 – Literature Review & State Survey 2.) Task 2 – Engineering Analysis and Simulation 3.) Task 3 – Crash Testing 4.) Task 4 – Documentation
Deliverables:	A report describing the results of the simulation and crash testing. Specifically document deflections from the various analyses.
Urgency and Expected Benefit:	MGS guide rail with reduced post spacings at half and quarter post spacing are used where lower deflections are needed. Information is needed on how much deflection exists when combining reduced post spacing with no soil backup.
Problem Funding and Research Period:	Total Estimated Cost = \$220,000 Total Estimated Time = 15 months
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