

Project Title:	High Tension Cable Barrier to MGS Guardrail Transition (2024-11-LSRB)
Project Synopsis:	<p>Currently there are no HTCB to guardrail transitions tested to Mash criteria. High tension cable barrier to MGS transition would provide an option to have one continuous barrier face from cable barrier to MGS to concrete barrier in lieu of leaving a barrier gap or providing a barrier overlap design.</p>
Project Goal(s):	<ol style="list-style-type: none"> 1.) Design a transition between HTCB and MGS guardrail. 2.) Test to MASH criteria. 3.) Provide crash test documentation.
Project Background:	<p>Utah has installed a HTCB to guardrail transition design as shown within the attached file from 2009 to 2017. In 2017 this design was removed from Standards until such time that a design has been successfully crash tested. To date, this system has functioned very well and has maintained tension after TL-3 impacts. This system was constructed with either wood or steel posts. Utah would prefer to test a system with steel posts.</p> <p>This design incorporates crash tested elements (End Treatment, guardrail, cable attachment rail) but it was not tested as a complete system. The anchor rail element will need to be redesigned to maintain cable tension without pulling the guardrail out of position and remain crashworthy.</p>
Proposed Work Plan:	<ul style="list-style-type: none"> Task 1 – Conceptual Design Task 2 – Simulation Analysis Task 3 – Construction Task 4 – Testing and Reporting
Deliverables:	<p>Compile summary report to document research effort, including literature review, CAD details, crash testing, and recommendations for further research in the event the of the system failing testing criteria.</p>
Urgency and Expected Benefit:	<p>The proposed system would provide one continuous barrier face from cable barrier to MGS to concrete barrier. This would provide a safer driving environment for the traveling public by ensuring that an errant vehicle is safely redirected and is not allowed to travers behind the barrier.</p>

Problem Funding and Research Period:	Total Estimated Cost = \$XX,XXX
Developer(s) of the Problem Statement:	Name: Shawn Debenham (Utah Department of Transportation) Email: Sdebenham Phone: 801-971-9575