

UTC Project Information	
Project Title	MPC-623 – Reliability of ABC Grouted Coupler Connected Bridge Piers Subject to Vehicular Impact
University	Utah State University
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Start and End Dates	February 18, 2020 to July 31, 2022
Brief Description of Research Project	Accelerated Bridge Construction (ABC) refers to a bridge construction type that incorporates innovative techniques, methodologies, and materials to efficiently reduce the construction time, traffic disruption and dynamic performance. The seismic performance of typical ABC pier-footing connections has been undertaken in high earthquake prone states previously, but the performance of these connections under vehicular impact has yet to be studied. This performance is of particular interest because of the frequency of occurrence of vehicular impact to bridge structures. Additionally, the damage resulting from the impact may appear to only be cosmetic; however, the residual capacity of the pier can be drastically reduced. This makes it even more susceptible to failure under subsequent extreme dynamic loading such as seismic. This study analyzes the residual seismic capacity of grouted coupler pier connections that have been subjected to varying levels of vehicular impact. Both the damage level under impact and the resulting reduction in seismic capacity are evaluated to determine the reliability of such connections under a sequential multi-hazard loading scenario.
Describe Implementation of Research Outcomes (or why not implemented)	
Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	

Web Links

- Reports
- Project Website