In 2015, President Obama’s administration issued the Office of Management and Budget’s Circular A-11, which directs Federal agencies—including transportation agencies—to consider climate preparedness and resilience as part of their FY 2017 construction and maintenance budget requests. The effects of a changing climate on transportation corridor slopes is poorly understood, but several recent studies suggest that landslide activity, especially rockfall, is likely to increase as a consequence of increased occurrence of intense precipitation events. This work will be a necessary first step in providing the tools to accomplishing the OMB’s Circular A-11’s directive.

Since 2012, we have been acquiring high-resolution lidar surveys of close to 20 rock-slopes in Alaska in support of Pactrans-supported studies of roadway safety. In this project, we will capitalize on this treasure trove of unique data to quantify how rockfall activity (magnitude-frequency of rockfall events) varies with changes in annual storm intensity from 2012 to 2016. We will then use this information to in conjunction with a landslide activity forecasting procedure we developed to investigate how the resiliency of transportation corridor may change in the future.