

RP 310 – Geotechnical Asset Management for Rock Slopes and Rockfall Risk Assessment

○ Project Description:

Idaho's current rockfall management efforts vary among ITD Districts in the state and rely on subjective input like individual experience and institutional knowledge. The lack of standardization leads to challenges with risk assessment, project prioritization, and reactionary project implementation rather than mitigation planning and application of preventive measures. To improve safety and to more efficiently implement mitigation projects, this research will develop and execute a standardized system to manage rock slopes, assess risks associated with rock fall hazards, and to establish a clear means of documenting and communicating the locations of hazards along Idaho's highway network. The desired outcomes of this project are three-fold. First, to enhance safety on Idaho's highways through the development of a standardized system to rate slope stability and rockfall risk. Second, prioritize slope stabilization projects through a consistent evaluation of the slopes and development of a database for streamlined production of custom reports and GIS mapping. Lastly, implement research by providing and testing a training program on the slope rating system, data entry and management, and production of reports and maps.

○ The objectives of this project are:

1. To conduct a literature review and survey of leading states on the state of practice for managing rock slopes and other geotechnical assets.
2. To compile and review ITD's existing rock slope data and management approaches.
3. To develop and refine a rock slope management and assessment system that includes a centralized digital rock slope geodatabase.
4. To inventory and assess slopes on the state highway system throughout Idaho.
5. To develop training materials and deliver training to ITD staff on use of slope management and assessment system.
6. To develop implementation and mitigation strategy for incorporation into ITD planning processes and procedures.

○ Estimated Completion Date: June 15, 2026

○ Budget: \$500,000

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