When little is known about actual traffic loads on a bridge, engineers’ bridge load ratings tend to be inaccurate. This leads to excessive conservatism in some instances (i.e. bridges are recommended for repair when they don’t need it) and dangerous overestimates of bridge safety in other instances. The goal of this project is to verify an analytical model from which an accurate load rating can be obtained. The model will be developed by the UAB team and calibrated using field-measurement data already collected during previous bridge weigh-in-motion (BWIM) projects. The UAB team will use the raw strain data collected by the mounted strain transducers from the field tests. This project could significantly benefit the Alabama Department of Transportation’s (ALDOT) bridge management and maintenance efforts because it could reduce or remove load posting for the state’s inventory of bridges deemed structurally deficient by traditional load-rating methods.

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Subjects
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