

**Test Area Investigation Report
Mine Research Project GUE-70-14.10
BBC&M Engineering
Phase II
EXECUTIVE SUMMARY
SJN: 45041**

The GUE-70-14.10 Mine Research Project is the investigation of a 2,100-foot-long section of Interstate 70 in Guernsey County, Ohio. Portions of the Project Area pavement were damaged as a result of mine subsidence. The damaged areas and other mined areas were remediated in 1995 by placement of grout in the abandoned mine workings beneath the roadway. Concerns are present regarding the post remediation condition of the soils and bedrock beneath the project. The objectives of the investigation were two fold:

- 1) detect the presence and ongoing formation of voids or anomalies beneath the pavement using various geophysical, geotechnical, and groundwater investigative methods.
- 2) field test and evaluate investigative methods to determine their suitability for use on other similar projects.

The project work was completed in two phases. Phase I evaluated the effectiveness of various investigative methods on a 200- foot-long segment of the eastbound lanes. A report detailing the findings of the test method evaluation (Phase I) was submitted on January 12, 2001. Phase II of the project applied the most effective methods (as determined by Phase I of the work) to the evaluation of the entire Project Area. This report contains the findings of both the methods evaluation (project research) and evaluates the site specific conditions.