TURNING UP THE PRESSURE

GEOLOGISTS BREAK ROCKS TO ENSURE SOLID BRIDGE FOUNDATION

The MRB team is now studying soil and rock samples obtained when crews drilled into the Mississippi River bed in late fall 2008.

In a laboratory in central St. Louis, geologists are trying to break rock samples to see how strong they are. Design engineers will use this information to determine the strength of the bedrock in the river and how well that rock will support the bridge. Soil samples help the engineers understand, among other things, how the soil will respond during earthquakes.

From that information, the engineers can determine how to best construct the foundations for the bridge. This is an extremely important decision, as bridge costs are dependant on what type of foundation engineers choose.

Above: Phil Riehl, Geotechnology Inc., prepares a sample of limestone for an unconfined compression test. In this test, geologists determine how much pressure the rock can take without shattering. Left, Riehl examines the remains of the limestone after the test.

ESTIMATED PROJECT COST

Illinois Relocated I-70 roadways (including the I-70/I-64/I-55 interchange)	$264 million
Mississippi River Bridge (with Illinois and Missouri approach structures)	$306 million
Missouri I-70 interchange	$70 million
Total	**$640 million**

SOURCES OF FUNDING

Illinois funding	$313 million
Federal funding	$239 million
Missouri funding	$88 million
Total	**$640 million**