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### Laser Targets Bridges Of Madison County

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POSTED: 11:12 am CDT July 7, 2010  
 UPDATED: 6:31 pm CDT July 12, 2010

**WINTERSET, Iowa** -- Researchers are using a 3-D laser scanner on four historic Madison County covered bridges this week.

The research team will be at Roseman Bridge, Imes Bridge, Hogback Bridge and Cutler-Donahoe Bridge.

They said they plan to use the laser scanner to capture minute details on each bridge for historical record.

The laser will record all visible data and detail of the construction of the bridges that will be used to create detailed computer-generated drawings and models.

"I feel it's an honor to be allowed to document these," said William Krueger, vice president of SightLine, a Milwaukee-based preservation company.

The laser scanner is doing more than just taking a picture.

"With a snapshot, you can see there's of course a visual image, but you can't really measure anything accurately from a photo," said Krueger.

Every pixel is a point in space that can be located and measured.

"So we can get all the widths and thicknesses of the boards, the how they might gently warp one way or the other and how the bridge itself twists to one end to the other, the span," said Krueger. "All these little idiosyncrasies you can pick up with a laser scan and it's really a wonderful tool. We can capture the wood grain in the beams and stuff. And all the graffiti inside the bridge. It'll capture that too."

Williams said the scan is a snapshot in time of the bridges.

"You'll be able to look at the images and we'll also make a three dimensional flythrough movie so you'll be able to, in a sense, experience the bridge. You'll be able to walk through it and come around," said Williams.

"So if something should happen to this structure, it can be rebuilt," said Penny Anstey, president of SightLine. "Whether it's a fire or tornado or whatever the case may be, once we put a movie on it, people anywhere in the world can visit the bridge."

The scanner takes a 360-degree picture.

If you or I were measuring this bridge, we're going to overlook things or we're going to miss things or we're going to take a break. Well the scanner doesn't do that. It gets everything in its sight," said Anstey.

"I didn't realize that the bridges were such celebrities," said Anstey.

The bridges were built in the 1880s.

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KCCI-TV's Eric Hanson reports.



Researchers said the scans will serve as a guide for rebuilding or repair should the bridges be damaged or destroyed. The Cedar Creek Bridge was destroyed by arson in 2002.

The team plans to be at Roseman Bridge on Monday, Imes Bridge on Tuesday, Hogback Bridge on Wednesday and Cutler-Donahoe Bridge on Thursday.

The \$50,000 project is being paid for by the Federal Highway Administration, in cooperation with the National Center for Wood Transportation Structures and the Natural Resources Research Institute at the University of Minnesota-Duluth.

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