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Dessert cake provided to the BoD members  
at the Horseshoe Curve visitors center  
by the Horseshoe Curve Chapter of the NRHS.

**Northstar Chapter  
National Railway  
Historical Society  
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*President* Bill Herzog

*Vice President* Doug Johnson  
612-825-6458  
djoh322721@aol.com

*Past President* Dan Meyer  
763-784-8835 (home)

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hmswan@webtv.net

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651-457-1610 (home)  
jmf@visi.com

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612-729-2428 (home)  
nevad11@hotmail.com

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320-587-2279 (No longer long  
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*Program Chairman & Editor*  
Glen Holmberg  
glen\_holmberg@yahoo.com



**North Star Chapter Membership Information**

Yearly dues are \$32 (this includes \$20 National dues and \$12 Northstar Chapter dues, plus \$3 more if you would like a family membership) made out to: Northstar Chapter, NRHS. Mail it to treasurer, Northstar Chapter NRHS, 1092 Humboldt Ave, West Saint Paul, MN 55118, or stop by one of our Saturday meetings and see what we are about.

**April Meeting Notice:** The April meeting will be held at the St. Paul Fire Training Center on **Saturday, April 17**, at 7 o'clock pm. The program will be a tape from the Altoona NRHS Chapter, and a tape of the Great Northern Railroad from the Bill Dredge collection.

## Swing time ending for railroad bridge over Black River at La Crosse, Wisconsin

During the last week of April, Canadian Pacific Railway will replace a 307-foot truss swing span with a more modern rolling bascule span, turning its 1902 swing bridge over the Black River between La Crosse and French Island into a lift bridge. Improvements to the railroad bridge, which is a mile south of the Interstate 90 bridge, will allow train traffic to operate more fluidly between Wisconsin and Minnesota.

"The new structure will substantially reduce maintenance costs in our current high axle loading environment and provide more reliability in operations, benefiting both the railroad and users of the river," said Ray Strelesky, manager project services in CPR's U.S. administrative offices in Minneapolis.

"The new structure replaces one that has served both the railroad and navigation interests well in its 100 plus-year history. When you consider that the design and construction were done at the turn of the last century, it is quite a testament to their abilities given the state of technology and construction materials at the time," Ray said.

La Crosse has long been a strategic railroad point. Currently, about two dozen freight trains and two Amtrak passenger trains a day cross four bridges there over the east and main channels of the Mississippi River, the Black River and the French Slough.

Before the 1870s, the Milwaukee Road, a CPR predecessor, used ferries and winter bridges, which were temporary trestles and tracks placed directly on the frozen water, to transport freight cars and locomotives between Wisconsin and Minnesota.

The Milwaukee Road built the current steel swing bridge in 1902 to replace an earlier iron bridge built in 1876 at the same location. The original bridge helped secure the railroad's success as a Midwest carrier and established the importance of La Crosse as a regional center of transport and trade.

The bridge was over-designed for the steam era.

"Railroad engineers had the foresight to know locomotives would get bigger. They built a lot of excess capacity into bridges. That's why you see a lot of old railroad bridges around," Ray said.

Completion of the \$16 million project the last week of April will involve rerouting trains and closing the Black River to navigation. Coordinating the work with railroad crews, contractors and the U.S. Army Corps of Engineers and the Coast Guard has been a once-in-a-lifetime experience for Bill Hager, CPR construction supervisor.

"This is the first time I have been involved in a project of this magnitude," said Bill, who has worked on the railroad for 34 years. "I couldn't dream of something like this coming up again."

Designed by HNTB Corp. of Kansas City, Mo., under the direction of CPR's Structures Planning and Design Group, the new 147-foot bascule span will lift on the east end to create a 60-degree angle open to the west, allowing boats to pass through the river channel below. The span will open by rolling back on a half-moon shaped girder powered by an electric motor, which will be housed in a machinery room at the top of the bridge. A bridge tender, who used to operate the swing span from a control house in the middle of the bridge, will operate the new span from a control house on the east end of the bridge.

The bascule span weighs 987,000 pounds, not counting the 865,000 pound-concrete weight on one end, which assists in the opening and closing of the structure. The combined weight is equivalent to more than four locomotives.

Marveling at the bascule structure's finely balanced design, Ray said, "All of that weight will be lifted when the bridge is operated by only two 30-horsepower motors."

Crews from CPR's contractor, Edward Kraemer & Sons of Plain, Wis., have been building the bascule span on "falsework", which extends perpendicular from the riverbank into the Black River. Since work began in November 2002, the contractor has built five piers and six spans to replace four piers and four spans, including the center swing span which uses its original rim-bearing turning machinery.

A few days before the swing span is replaced, a barge will get into position under the new bascule span and extend two jack towers to lift it off the falsework. Removal of the swing span will begin at 7 a.m. April 26, when crews will cut the old span in two. A second barge placed upstream and a third one placed downstream of the existing draw span will use jack towers to lift the old disassembled span off its pier and transport the pieces away for further dismantling. Beginning at 8 a.m. April 27, the first barge will carry the new bascule span into the river channel and do a 180-degree turn to get in position before fitting the span into place with the help of hydraulic cranes. The process is expected to take until up to midnight. Meanwhile, two smaller approach spans also will be floated on barges and rolled into place on the bridge.

Changing out the spans will require a great deal of coordination between Kraemer, CPR and navigation interests. The river under the bridge will be closed to recreational and commercial navigation for up to 120 hours. Trains will resume crossing the bridge at 7 p.m. April 28, and the new span will be opened for the first time at 11 a.m. April 29.

**IF YOU GO:** Beginning April 26, spectators can go to a public viewing area set aside at 816 S. Bainbridge St. on French Island. The viewing area, which is 300 feet north of the railroad bridge, will be open while work is in progress. Public parking will be along Bainbridge.

Northstar News  
2642 Clearview Avenue  
Saint Paul, MN 55112

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