

Charlotte Highway Bridge Update (October 1, 2006)

Vern Mesler, Project Manager for the restoration of historic bridges for Calhoun County Historic Bridge Park



Mike Mort and Dennis Randolph visit the Charlotte Highway Bridge worksite to watch the lifting of a vertical assembly with the gin pole



Charlotte Highway Bridge Top Chord set in place with the Gin Pole

Book Author Visits the Bridge Site

Mike Mort is the author of a soon-to-be published book by MSU Press “A Bridge Worth Saving: A Community Guide to Historic Bridge Preservation.”

Mort is the owner and president of Equity Studios, a television and film production company in Sturgis, Michigan. He is the executive producer of *Michigan Avenue*, a topical film series about the history of Michigan as seen on Michigan PBS. His most recent broadcast work is *From Moccasins to Main Street*, an hour long docu-drama about the history of the Chicago Road from Detroit to Chicago. He is currently working on *That Kind of Power*, a showcase piece for the National Science Olympiad and the *History of Michigan Project*, a five hour definitive film about the history of Michigan.

Lifting with the Gin Pole

Lifting a 1700-pound top chord section of the Charlotte Highway Bridge with our gin pole requires careful preparation. Nylon lifting straps are secured in the center of the top chord section and attached to a heavy duty shackle and then connected to the lifting hook of the gin pole. Wayne Conklin checks the stabilizing jacks on each corner of the gin pole and then positions himself on the gin pole to begin the lifting process. With the winch controls in one hand, Conklin checks the steel lifting cable to make sure the cable feeds evenly on the winch drum. Ever cautious, Conklin checks for anything out of place and listens for unfamiliar sounds while tightening the lifting cable. If Conklin is satisfied that everything is in order he yells out in a clear voice “Going up” and the lifting of the top chord starts.

Rob Denniston and I attach a 20-foot guide rope on each end of the top chord to keep it level and to remain clear as the gin pole lifts the top chord to the top of the bridge. After a steady climb the top chord reaches the top and we prepare to connect it to a previously set top chord. Denniston quickly climbs to the top of a twenty foot scaffold by an attached scaffolding ladder and attaches a safety lanyard and his body harness to the top of the bridge. Denniston positions himself on top of the bridge and guides the end of the top chord into the splice plate of the previously set top chord. With a few adjustments of the gin pole and the guide lines Denniston slips the top chord into place. Conklin and I move the top chord over the vertical it will be pinned to, and Conklin lowers the top chord onto the vertical.

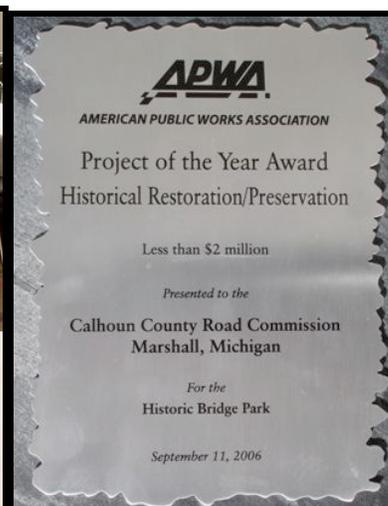


During the spring of this year Conklin and Denniston began installing the wood deck on the replicated floor beams of the Charlotte Highway Bridge in preparation for putting up the trusses. The gin pole was also being fabricated at this time with the help of Frank Hatfield, P.E. Professor Emeritus, Civil and Environmental Engineering, Michigan State University. On May 24th it was placed on the deck.



On September 29th two inclined end posts and portals were set in place. After pinning and bolting everything in place the gin pole and scaffolding will be moved to the other end of the bridge to finish the last two panels of the Charlotte Highway Bridge.

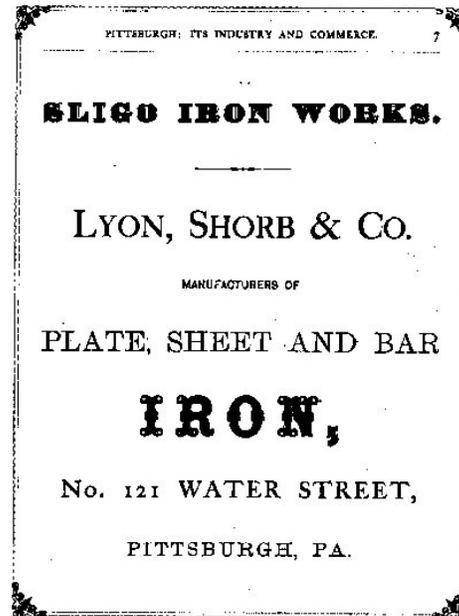
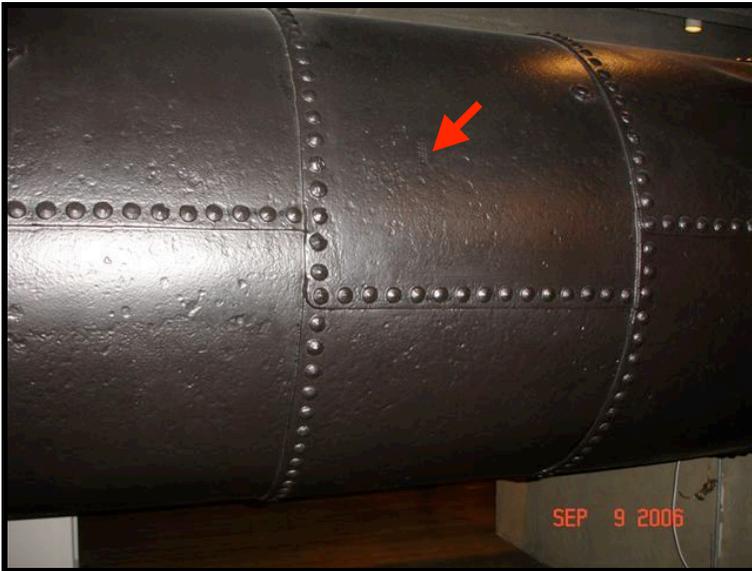
In 1886 the Charlotte Highway Bridge was built across the Grand River in Ionia County south of Portland, Michigan. It was the same year Karl Benz applied for a patent for his three wheeled motorwagan, patented as a “vehicle with gas engine operation.” Twenty two years later Henry Ford’s Motor Company began the production of the affordable Model T automobile. The horse and wagon for which H. P. Hepburn Engr. & Contr, Cleveland, Ohio, designed the wrought iron bridge would soon be replaced with much heavier vehicles. The bridge would remain in service until July, 2001. When the assembly of the Charlotte Highway Bridge is complete, it will span the entrance of the Historic Bridge Park, a lasting testament to the skills of those early craftsmen.



Annette Chapman, RLA, Director, Calhoun County Department of Parks and Recreation, and I attended the 2006 APWA Congress and Exposition in Kansas City to receive the American Public Works Association award for project of the year. Calhoun County Historic Bridge Park won the award for Historical Restoration/Preservation.

My wife Nan Jackson and I spent the weekend before the American Public Works Association award ceremony to explore Kansas City. Nan is a professor at Lansing Community College and has contributed many hours toward the success of the Historic Bridge Park.

One of the highlights of our weekend was visiting the Steamboat Arabia Museum (<http://www.1856.com/>) that tells the story of the discovery and excavation of the Steamboat Arabia and its 200 tons of cargo (on display at the museum). The Arabia's three large boiler tanks were set up in the museum. As I do when inspecting historic bridges, I looked for mill marks on the wrought iron, and I found a very faint mill stamp (marked by arrow in photo). After magnification, I found it read Lyon Shorb & Co. Pittsburgh, PA, a mill that rolled plate.



An Ad for Sligo Iron Works, Pittsburgh, PA ca.1870.

(Courtesy of "*Pittsburgh Its Industry & Commerce*," ca.1870, Barr & Myers)

More Awards for the Historic Bridge Park

In May, 2006, Dennis Randolph, Managing Director of Calhoun County Community Development, and I received the Michigan Chapter of the American Public Works Association 2006 Project of the Year for Historic Restoration. Below is a list of other awards the Historic Bridge Park received recently.

APWA, American Public Works Association Southwestern Michigan Branch 2005 award for Public Works Projects of the Year Historical Restoration.

**NACPRO, The National Association of County Park and Recreations Officials
NACPRO 2003 Park and Recreation Facility-Class II Award**

ASCE, American Society of Civil Engineers, Michigan Section, 2001 Historical Civil Engineering Landmark Award.

For more information about the Historic Bridge Park, please contact Annette Chapman, RLA, Director, Calhoun County Department of Parks and Recreation, 269-781-9841 or achapman@cccd.net

We are looking for new sources of funding for the Historic Bridge Park and in particular funding for historic bridge restoration workshops. Please contact Annette Chapman with your suggestions.