

Roundhouse Notes

Paducah Chapter
National Railway Historical Society
August - December 2017

Metropolis Bridge Turns 100.

The 6,424 ft railroad bridge over the Ohio river between Metropolis IL and Paducah KY turns 100 On December 15 this year. Construction started in 1914 and was completed in 1917 for cost of \$4 million. (\$96 million in today's money .) Originally built by CB&Q then owner ship passed to the Paducah and IL railroad (P&I) after completion. The P&I was a joint railroad owned by CB & Q and NC & STL. In 1925 IC purchased a 1/3 interest in the P&I to gain access to the bridge.

CN (IC) and BNSF(CB&Q) still own the P&I and maintain the bridge. The CN maintains the whole P&I trackage from the bridge into Paducah (15+ miles)

The Following is from *Railway Review* January 1918

The new bridge over the Ohio river at Metropolis IL built by the Chicago Burlington & Quincy R.R and the Nashville, Chattanooga & St Louis RY , has been opened to traffic. Owing to the exigencies of a rigorous winter which blocked the river with ice, and the unusually heavy traffic on account of the war, the "fuss and feathers" were eliminated and the great structure was opened ahead of the date anticipated.

This bridge was constructed by a company organized as the Paducah and Illinois R.R., owned jointly by the two railroads named. It forms a final connecting link in a new low-grade route from Puget Sound to Florida.

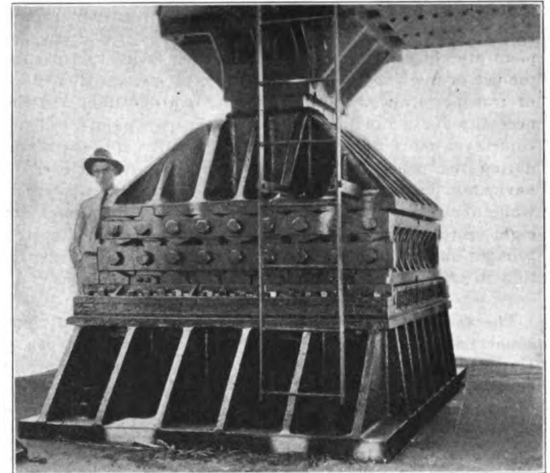
The bridge is a mile and a quarter long, built for double track and is

one of the noted bridges if the world. It contains the longest simple span -720 feet- ever constructed. This type of span was used on account of no rock in the foundation. There are seven piers, the largest on being 60 x 110ft. at the bottom and 187 ft high, larger than the average skyscraper. It contains 15,640 cubic yards of concrete and 236,000 pounds of reinforcing rods.

The total amount of steel in the bridge is approximately 17,000 tons and the total quantity of cement approximately 150,000 barrels. The total quantity of gravel used was about 100,000 cubic yards.

The steel was furnished and erected by the American Bridge Co. and the piers built by the Union Bridge & Construction Co.

C.H Cartilage of the Chicago , Burlington & Quincy R.R., was chief engineer up to the time of his death last year , when the work was taken over by Ralph Modjeski, who previously had been consulting engineer.

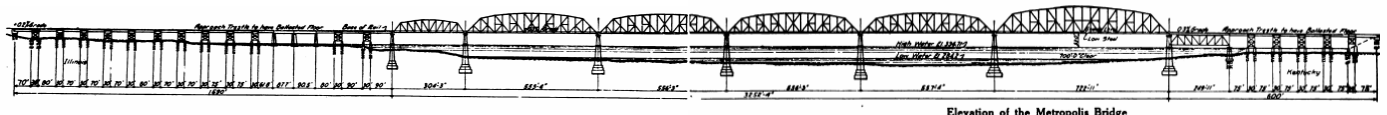


One of the "shoes" of the Metropolis Bridge. Height is 81/2 feet and it weighs 89,000 pounds.



1918 End view of the bridge. The double track shown was artist rendition as the engineer reported only one track was constructed. The entire P&I infrastructure was made for double track but never completed. This evidence can be seen at bridges crossing 32nd street, Jefferson and Broadway streets in Paducah

Below is elevation drawing of the bridge from *Railway Age Gazette* 1915



Elevation of the Metropolis Bridge

NEWS AND VIEWS

Charlie G

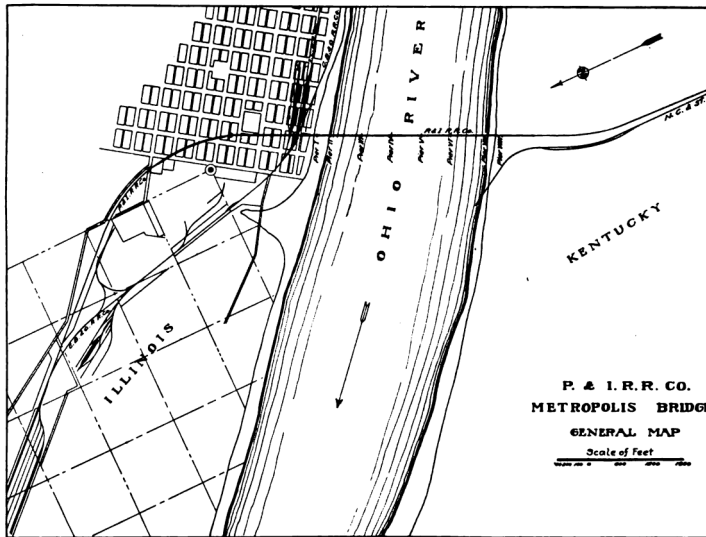


Fig. 1

Map of Metropolis Bridge location.

Excerpts from a paper presented by Ralph Modjeski in the *Journal of the Western Society of Engineers*.

Preliminary surveys were made a different times between 1906 and 1911, and the final location was approved in 1912. This locations included a bridge at Metropolis and about 13 miles of new line from the CB&Q terminal at Metropolis to the N.C & ST L Connection at Paducah KY. The Bridge crosses the Ohio River at the town of Metropolis about 12

miles blow Paducah KY. Its direction is practically North and South.

The main bridge at the North or Metropolis end consist of one 300' through pan, four 551' 3' though spans, one 720' through span, and one 246' deck span.

The length of the 720' span was dertermined

by the requirement of the United States Government fir a 700' clean span next to the Kentucky shore. The Government also required a clearance of 53' above high water of 1887, or above elevation 336.71

United States Gov-
ernment gauge.

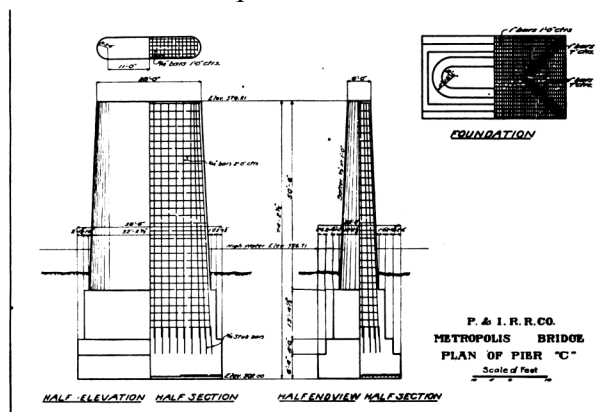


Fig. 25

Bridge pier construction plans

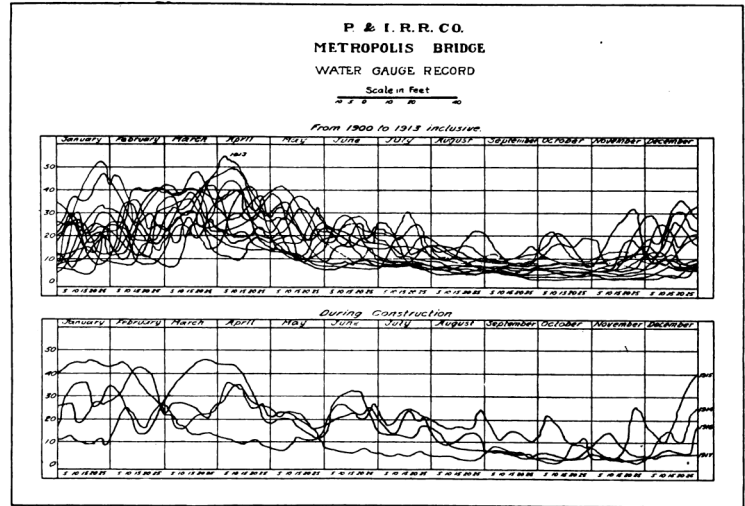
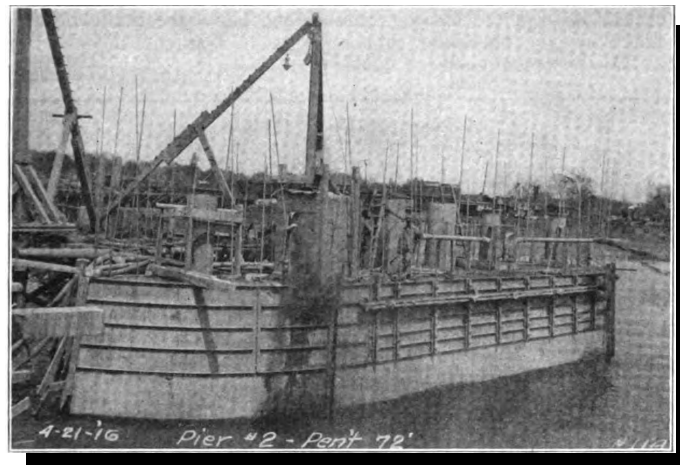
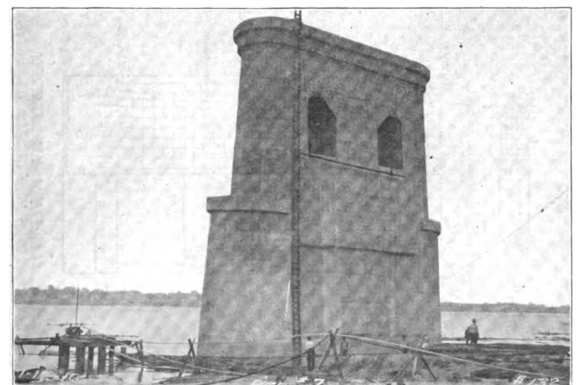


Fig. 3

Hydrology report for water levels at the Metropolis Bridge site

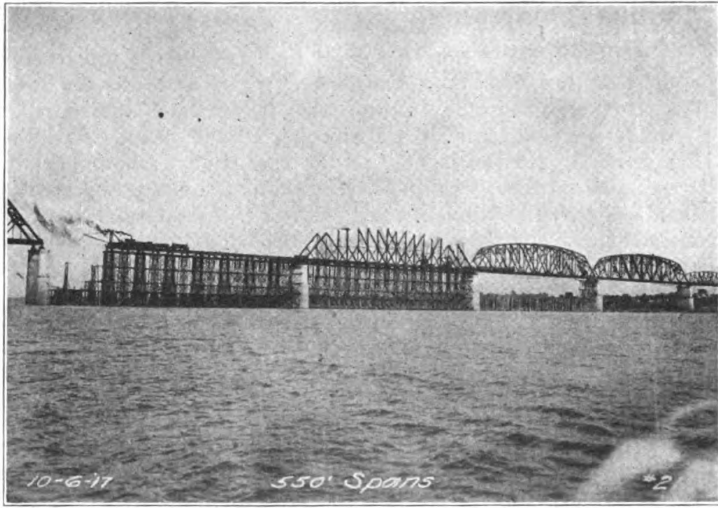


Concrete forms for pier 2



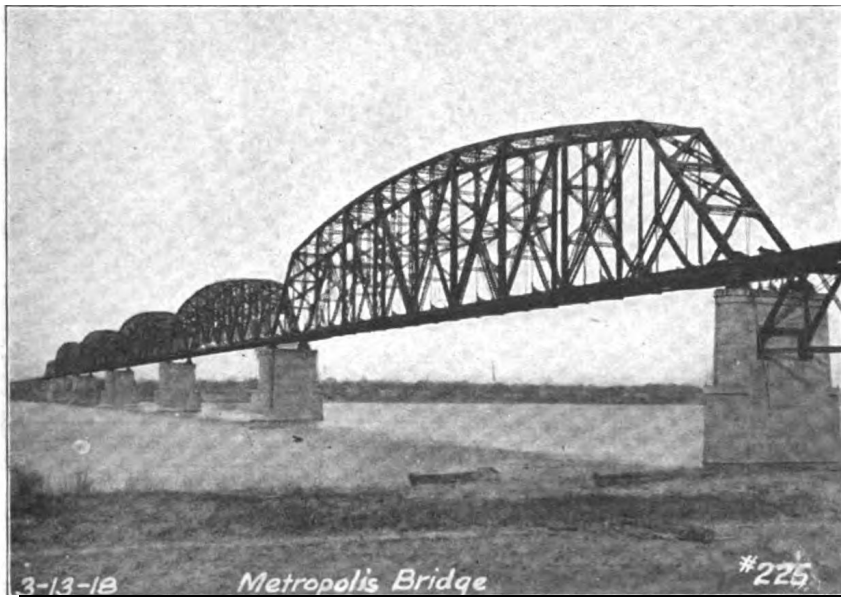
Completed Pier 7



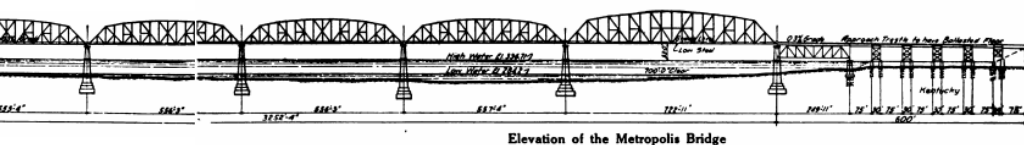


550 ft span under construction.

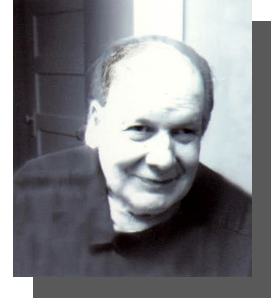
The weight of the steel in the 720' span, excluding the end bearings, is approximately 7,8000,000 pounds.



The Finished bridge in March of 1918



In Memoriam



Will Ed Winfield passed away May 10th, 2017 He was 82 . Will Ed was one of the charter members of the Paducah Chapter NRHS. He was employed as an electrical engineer at Paducah Community College and in later years worked at Central Photo on Broadway.

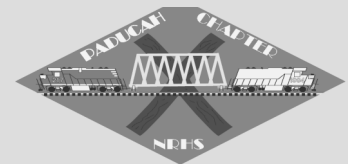
Museum

Our Polar Express party was a huge success this year with over 68 children attending the various events at the museum.

As December winds to a close the museum is preparing to shut down for the months of Jan and Feb.

Our last day this season will be Friday Dec 22nd and we will re-open March 2018

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A group of children listen to The Polar Express story at the Polar Express party Dec2 at the Museum.

**Next Meeting
January 9th
At the Museum
7Pm**

Roundhouse Notes
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