



# Bridges and Byways

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Ohio Historic Bridge Association  
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## Meeting Notes:

### OHBA

**September 16, 2018**  
**Fall Bridge Tour Southwest Ohio:**

**Meet at 10:00 am at McDonalds at 601 S. Locust St, Oxford, Ohio** (South of Fairfield Rd. on east side of Locust)

We will be visiting: Black CB, Gov. Bebb CB, Massillon Bowstring Bridge, a concrete through arch bridge, Jediah Hill CB, Roebling Suspension Bridge, Stonelick CB, and a Champion Bridge through Truss.

**Lunch** will be at the Massillon Bowstring Bridge which is located at the Crosby Township Citizens Center. Bring your picnic lunch or purchase something at a nearby mini-market.

**November 18, 2018: 1:30 pm**  
**Annual Business Meeting** . Ohio History Connection Auditorium, 800 E. 17th Avenue, Columbus, OH (Exit 111 off Rt. 71)

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## Other Bridge Happenings:

**Union County CB Festival:** Sept. 22-23, 2018

**Ashtabula County CB Festival:** Oct. 13-14, 2018

**Parke County Indiana CB Festival:** Oct. 12-21, 2018

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**Renewal subscriptions were due by January 15, 2018. See page 7 for details.** Your mailing label has your subscription date at the top.

The OHBA Web site is now available at [www.oldohiobridges.com/new/OHBA](http://www.oldohiobridges.com/new/OHBA)

OHBA is a not-for-profit organization incorporated in the State of Ohio and is recognized as a non-profit organization under 501 (c) 3 of the Internal Revenue Code.

**President's Corner.....David Simmons**  
**Historic Bridge Research**

Miriam Wood once had a goal of identifying every covered bridge ever built in Ohio. So she spent countless hours pouring over old county commissioners' journals—often on rolls of micro-film—documenting covered bridge contracts. Before health concerns forced her to quit, she had reviewed many Ohio county journals, but today, a large number remain untouched, among them Delaware County.

Delaware County is particularly promising, because the auditor carefully transcribed the specifications prepared for each contract during the mid 19<sup>th</sup> century. While drawings that no longer exist are often referenced, the specifications are so detailed that it is possible to learn a great deal about the county's bridge history and gain new insights into Ohio's engineering heritage.

The Stratford Bridge built in 1852 over the Olentangy River south of the county seat (now SR 23) is a good example. Oddly, neither the length or width of the bridge are given, but based on the specified number of "stringers" (lower chord) and "plate stringers" (top chord), it's possible to determine the bridge consisted of three 63-foot spans, running overall around 200 feet. Similarly, the width can be determined by the length of the "cross cap beams" that were mortised onto the tops of the verticals. Subtracting half the width of the two lower chords leaves a little less than 18 feet for the roadway width.

Based on the references to posts (verticals) measuring 6 x 8 inches, main braces of 3 x 16 inches, and cross braces of only 3 x 4 inches—all of "good white pine"—the truss type can be identified as a Long. This famous truss, patented in 1830 by Stephen Harriman Long, was the nation's first "scientific" bridge design, precisely defining the load capacity. It also included the placement of wedges at the ends of the cross braces that could be driven to physically "prestress" a bridge and substantially increase its strength even further.



**Prospect, Ohio, resident T. E. Howald photographed Delaware County's Stratford Bridge as he sped by on the interurban bridge, the piers from which still stand in the Olentangy River. The photo has to postdate 1903, when the interurban began operating. Todd Clark Collection**

It is interesting that the Stratford specifications make no mention of these wedges. That may have been an attempt to avoid paying patent rights, or it could indicate that Delaware County officials had no appreciation for this innovative concept.

The one-inch pine siding was specified as tongue and groove and was to be painted with three coats of white paint. The deck was to consist of two layers of plank and be covered with a protective layer of 2 inches of either tar or sawdust.

The builder was David T. Sherman, who lived with his family in a house still standing at Berkshire in Berkshire Township. When the current owner pulled up the kitchen flooring for a home improvement project, massive structural timbers were uncovered in the subflooring, obviously material salvaged from one of Sherman's numerous bridge projects. Sherman died in 1867, but as he neared the end of his life, he bid on a proposal to replace a bridge over the Scioto River near Ostrander in western Delaware County.

Three very different versions of this Scioto River Bridge on the Delaware-Marysville Road (now SR 36) are documented in the county commissioners' journals between 1849 and 1865. The first was a three-span "trussell" bridge, not unlike those still used on many railroads. The posts and caps of oak were massive, measuring 14 inches square and were presumably driven into the riverbed. Mudsills were placed between the bases of each pair of posts. Braces of various sizes ran the 15 feet between the sills and caps of each trestle bent. Five 30-foot-long stringers, measuring 7 x 14 inches in the center and 7 x 10 inches at the ends, ran between each trestle. All the components were connected with iron bolts, and a 3 ½-foot-high railing ran along both sides of the 21-foot-wide deck, covered with 2-½-inch planks.



**The Scioto River Bridge in Delaware County's Scioto Township was built in 1864, but most of the original two coats of white paint had weathered away when it was photographed at the turn of the 20<sup>th</sup> century. More importantly, however, the original camber was still apparent**  
*Ohio History Connection, SC 1156*

It was replaced in 1856 by a single-span, 190-foot Burr truss of white pine erected by E. B. Gray. This bridge had a single top chord of 9 x 10 inches and a pair of 6 ½ x 13-inch lower chords. The verticals, cut from 9 x 15-inch timbers, were chiseled down to 9-inch squares in the center, but adequate wood for the braces to bear upon remained at the ends. Both trusses were sandwiched by pairs of arches that measured 6 ½ x 13 inches. Gray was a fairly accomplished bridge builder, for shortly after this project, he built a wire suspension bridge in Portsmouth near the mouth of this same river.

The long span of this second bridge may have led to problems, for in 1864, only eight years later, the commissioners were discussing its replacement. A new pier was built in midstream for a third bridge, dividing it into 2 equal lengths of about 98 feet. Each span was to have a camber, or “crowning,” of a foot.

It was no longer possible to specify the once-common 60+ or 30-foot timbers for a new bridge. Instead, the specifications explained how and—in order to avoid placing joints adjacent to one another—where to piece together the 6 x 12-inch segments of the pair of lower chord members. The truss type in this case, with verticals that were also enlarged at each end to accommodate the compression diagonals, was a multiple kingpost. The use of this truss type on Zanesville’s Y-bridge in the 1830s had helped to elevate its popularity, and it was often called a “Buckingham” truss after the builder of that bridge.

David T. Sherman and Jarvis Landon Jr. bid on the Scioto River project. They both proposed adjusting their price down if they were allowed to salvage and reuse the material in the old bridge. In the end, the commissioners accepted Landon’s less expensive proposal. Interestingly, Landon was a neighbor of one of Sherman’s children who sometimes worked with his father on bridge projects. Could Landon have been an apprentice with the senior bridge builder that was now bidding against his master?

The history of these now-lost bridges, gleaned from county records, serve as examples of the wealth of stories just waiting to be discovered with a little careful research.

**Bridge News.....David Simmons, Doug Miller, and Elma Lee Moore**

**Volunteer Bridge Dedication Ceremony, May 25, 2018 .....Elma Lee Moore**

Several OHBA members (and about 70 community supporters) attended the bridge dedication at Falling Rock Boy Scout Camp. David Fryman gave the introduction and closing remarks. David Simmons enlightened the audience about the unique history of our Ohio railroad bridges. Simmons related a story of his father-in-law who had a love of oysters. Refrigerated railroad cars made it possible for oyster bars to pop-up in the Midwest—far from the source of the oysters. The Volunteer Bridge came from the Ohio Department of Transportation inventory and was moved to Falling Rock and restored in 2018. It joins the Doc Brown Bridge and the Pappy Hayes Covered Bridge at that location.



The Volunteer Bridge because of its unique construction has no need for the vertical at the center. It was built by the Keystone Company of Carnegie Steel. OHBA donated funds for the signage at the bridge. It is a single span wrought iron Pratt truss Pony with inverted Queen post support deck and bulb-type I beams. It was originally constructed in 1875 on dual railroad tracks in Licking County and in 1895 moved to Seven Hills.

## Bridge News Continued

David Gill read a wonderful poem by Will Allen Dromgoole (1860-1934) who was a woman writing under a man's name.

### THE BRIDGE BUILDER

An old man going a lone highway,  
Came, at the evening cold and gray,  
To a chasm vast and deep and wide.  
Through which was flowing a sullen tide  
The old man crossed in the twilight dim,  
The sullen stream had no fear for him;  
But he turned when safe on the other side  
And built a bridge to span the tide.

“Old man,” said a fellow pilgrim near,  
“You are wasting your strength with building here;  
Your journey will end with the ending day,  
You never again will pass this way;  
You’ve crossed the chasm, deep and wide,  
Why build this bridge at evening tide?”

The builder lifted his old gray head;  
“Good friend, in the path I have come,” he said,  
“There followed after me to-day  
A youth whose feet must pass this way.  
This chasm that has been as naught to me  
To that fair-haired youth may a pitfall be;  
He, too, must cross in the twilight dim;  
Good friend, I am building this bridge for him!”

After the closing of the ceremony, a meal was served to all attendees. Following the meal, some attendees viewed the other bridges.

### Summer Picnic.....Elma Lee Moore



The picnic was well attended by 18 members. The day was sultry, but the food brought by members and ice cream churned by the Gnagy's made up for it. Satolli Glassmeyer of History in Your Own Backyard showed several videos of historic places in Ohio and Indiana. OHBA is considering developing such videos to meet our educational purpose.

There was a new addition to the picnic grounds. Todd Cash built a picnic table which sits under the trees at the lower parking area. This will be a wonderful addition for picnic goers stopping to view the bridge. Thank you Todd.

The Gnagy's also brought several books to give away as their hometown library was removing the books from their collection. Among them were several books by Eric Sloane and Miriam Wood's book.

Terry Miller announced that Ron Knapp's book about China's Covered Bridges will be released this fall.

**Satolli Glassmeyer**

# Bridge News Continued

## Spring Bridge Tour.....Doug Miller, David Simmons, and Elma Lee Moore



Our Spring bridge tour visited three bridges in each of Coshocton County and Licking Counties and one in Muskingum County. We were quite surprised at the first Coshocton County bridge when we drove up to it. It was quite spectacular. The two-span ← **Pennsylvania Through Truss** spanned the Walhonding River. It was built in 1914 by the Central Concrete and Construction Company and is 410' in overall length. A tree and other debris were lodged in the bridge structure. The water had been very high recently and could result in undermining the pier.

We continued to the **Helmick Covered Bridge** over Killbuck Creek. It was built by John Shrake in 1863 and rebuilt in 1995. It was noted that there was a sway on both spans, most likely a result of metal plates with steel connectors used in the rebuilding rather than wood.



From there we adjourned for lunch at

← **Roscoe Village** and viewed the **Roscoe Village Tow-path Footbridge** over the Ohio-Erie Canal lock. It was a single span, iron Howe pony truss built in 1872.

After lunch we proceeded to Muskingum County to the **Dresden Suspension Bridge**. This bridge was stunning. The 443' span was closed to traffic. It is of rare eyebar chain technology. It was built in 1914 over the Muskingum River re-

placing the original suspension bridge of 1000' which was destroyed in the 1913 flood (See photo on back page.)

In Licking County we saw the **Volunteer Iron Truss Bridge** at the Falling Rock Boy Scout Camp (see photo on page 4). We then drove to the **Roderick Bridge** on the OSU Newark Campus Bike path.

→ The 101' span Squire Whipple Iron Bowstring Truss was built in 1872 by the Coshocton Iron Works to span Wills Creek. In 1998 it was moved to its present location. The bridge was painted black and surrounded by trees which made it difficult to see as we approached it. The original bridge was dropped into the river during the move. Some pieces were lost and had to be refabricated using other material, resulting in those areas showing rust.



← The final bridge was the **Gallman Road Bridge**, a 152' span, wrought-iron, pin-connected, 11 panel Whipple Through Truss over Raccoon Creek on a pedestrian trail. It was originally built in 1887 and spanned the St. Mary's River in Mercer County. It was moved to this location in 2002.



(Photos of tour courtesy of David Simmons and Elma Lee Moore)

## OHBA Officers & Membership Information

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**DUES:** Senior (age 55 and over) \$8; Student \$8; Single \$10; Family \$15; Contributing \$25; Supporting \$40; Life \$250. Annual dues include subscription to Bridges & Byways, quarterly journal of the OHBA. Dues period is the calendar year. Dues paid after October 1<sup>st</sup> cover the succeeding year. Renewal dues to be paid by 1/15.

Please fill out the membership application form below and send it with your check made out to the OHBA to **Mr. Joseph Charles at 726 Newark-Granville Rd., Granville, OH 43023-1451.**  
**Be sure to include your 9 digit zip code.**

I wish to join/renew (circle) membership with the OHBA.

My name is \_\_\_\_\_

My mailing address is \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code( 9 digit) \_\_\_\_\_

My email address is \_\_\_\_\_

My phone number is \_\_\_\_\_

Enclosed is my check made out to the OHBA in the amount of \_\_\_\_\_ for a \_\_\_\_\_ year senior/single/family/contributing/supporting/life/student (circle) membership.



**Dresden Suspension Bridge over the Muskingum River - Photo by David Simmons**