

The Covered Bridges of Preble County

Past, Present and Future

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The History of the 8 Covered Bridges

There are 8 covered bridges in Preble County. Only 2 of them are moved for preservation. One is the Dixon Branch Bridge, which sits in Lewisburg Community park for all to enjoy. The other is one of the 6 remaining double – barrel bridges in the nation, and that is The Roberts Covered Bridge, which now sits next to Crystal Lake in Eaton. The other six include The Christman Bridge, Harshman Bridge, Geeting Bridge, Warnke Bridge, Brubaker Bridge and The Hueston Woods Covered Bridge.

WHY COVER THE BRIDGE?

Wooden bridges with exposed superstructures are vulnerable to rot. Covering and roofing them protects them from the weather, and so they last longer.

The American northeast was a forest country: wood was a plentiful building material, especially in the remote areas where the smaller bridges were needed. And the climate favored wooden construction. The climate of the region is harsh, by European standards -- hot in the summer and icy in the winter, with a freeze-thaw cycle that would overturn stone pavings.

Roberts Bridge



A toll road crossed Seven Mile Creek on Orlistus Roberts' farm three miles south of Eaton. Later the toll road became a free pike and then part of State Route 127. After S.R. 127 was relocated west of the Pennsylvania Railroad about 1935, the part of the former pike running through the Roberts farm became a lightly traveled farm to market township road.

While the road was in its heyday, Orlistus Roberts was awarded a contract to build a two-lane covered bridge where it crossed the creek on his farm.

Roberts, a native of Connecticut, had migrated first to New York, then to Lancaster, PA, and finally to Preble County. He was a genius at many trades including cabinet making, a carpenter, farmer, orchardist and a wine maker. The covered bridge was his last and perhaps greatest undertaking.

The bridge is built of poplar, beech and oak timbers cut and hewn on the Roberts farm. Bolts were forged in his shop. Stone for the abutments was obtained from the Halderman quarry several hundred yards up Rocky Run adjacent to the Roberts' homestead.

The design for the bridge included four large arches. Theodore Burr from Connecticut invented and patented that design in 1804.

Roberts did not live to see his bridge in service. Construction began in 1829 and was near completion the next year when he suddenly became ill and died on Aug. 20, 1830.

His apprentice, James L. Campbell, age 17, finished the bridge we know today as the Roberts Covered Bridge.

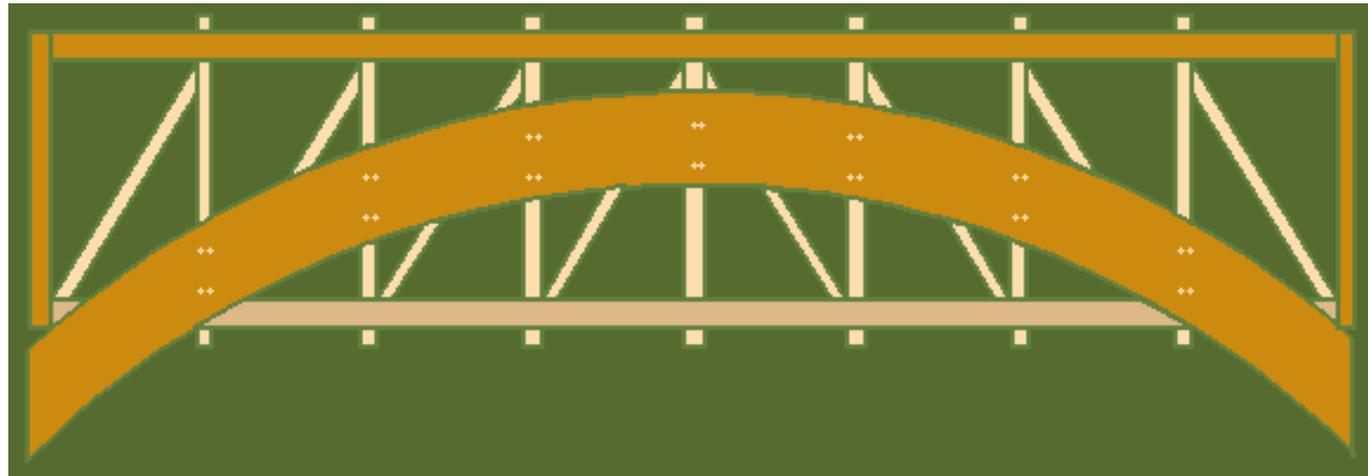
The Roberts bridge is the oldest covered bridge remaining in Ohio and is next to the oldest in the United States. It is Ohio's only double-barreled covered bridge and one of six still standing in the country.

Roberts bridge was painted red, a popular color for bridges prior to the mid 1800's.

Burr Arch

Burr Arch (B)

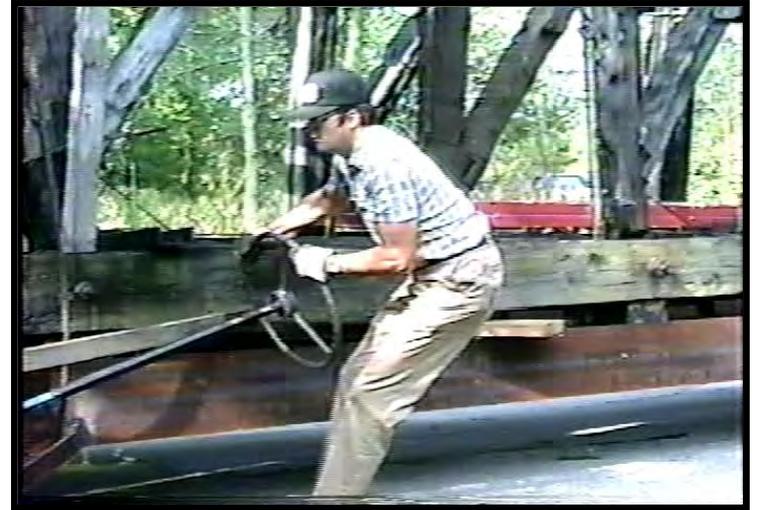
Patented in 1804 by Theodore Burr of New York, this design combined a large arch with a multiple kingpost truss. The addition of an arch was a traditional way of strengthening an existing truss. Many of Ohio's bridges were stiffened in this way.

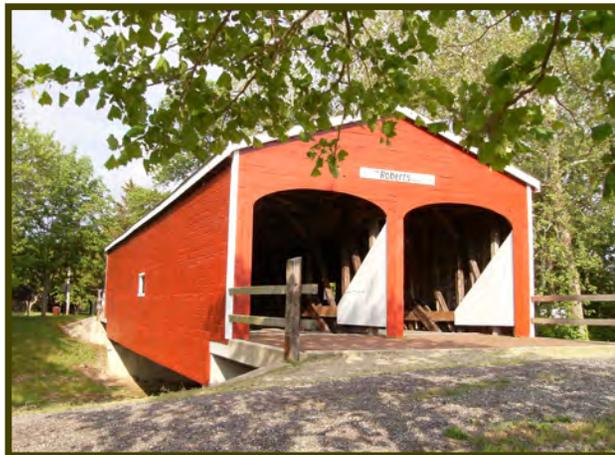




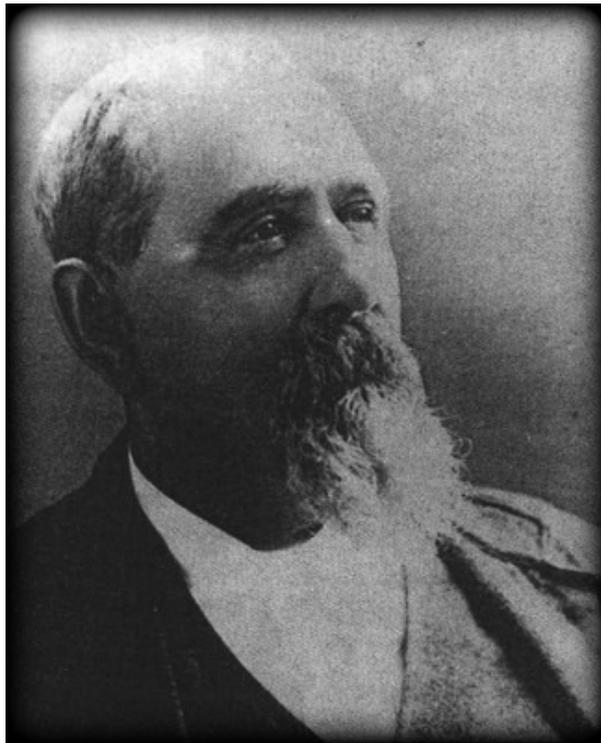
Restoration of Roberts Bridge







Evret S. Sherman



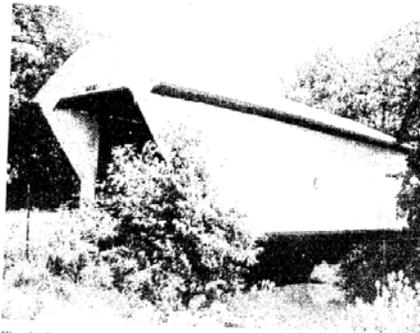
Historical research reveals that Evret S. Sherman, a native of Vermont, moved to Delaware County, Ohio, where he became a successful covered bridge builder. Somewhere he had become familiar with a bridge truss design from an expired patent by Horace Childs of New Hampshire.

The design was not used in any bridge until Sherman built one of the type in 1874 in Delaware County where it is standing today. It is the only bridge of that design outside of Preble County, Ohio.

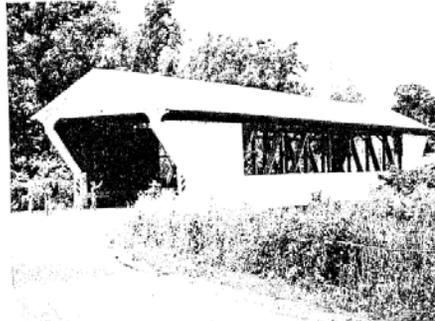
Sherman moved to Eaton immediately after the 1886 storm and began promoting his unique bridge design. His bridges were so sturdy and so economically and quickly erected that he won contracts to build 14 Childs Truss bridges and one multiple kingpost truss bridge in the county between 1886 and 1896.

The seven covered bridges remaining in Preble County are unique in several ways. One is the first covered bridge that was built here, another is the last one, and five are built from the rare Childs truss design.

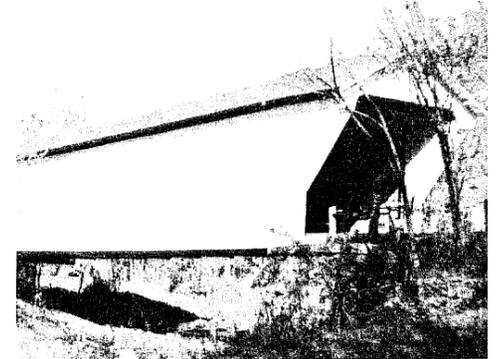
Historic Photographs



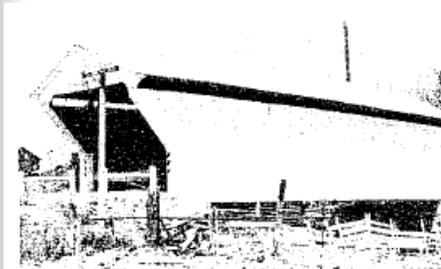
Warnke Covered Bridge



Brubaker Covered Bridge



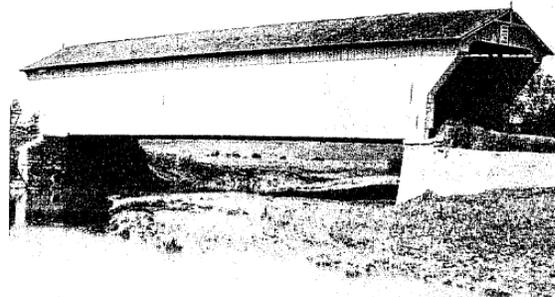
Christman Covered Bridge



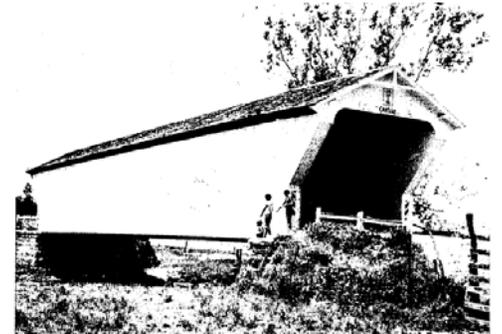
#4 - Dixon Branch Bridge



Roberts "Double Barrelled" Bridge

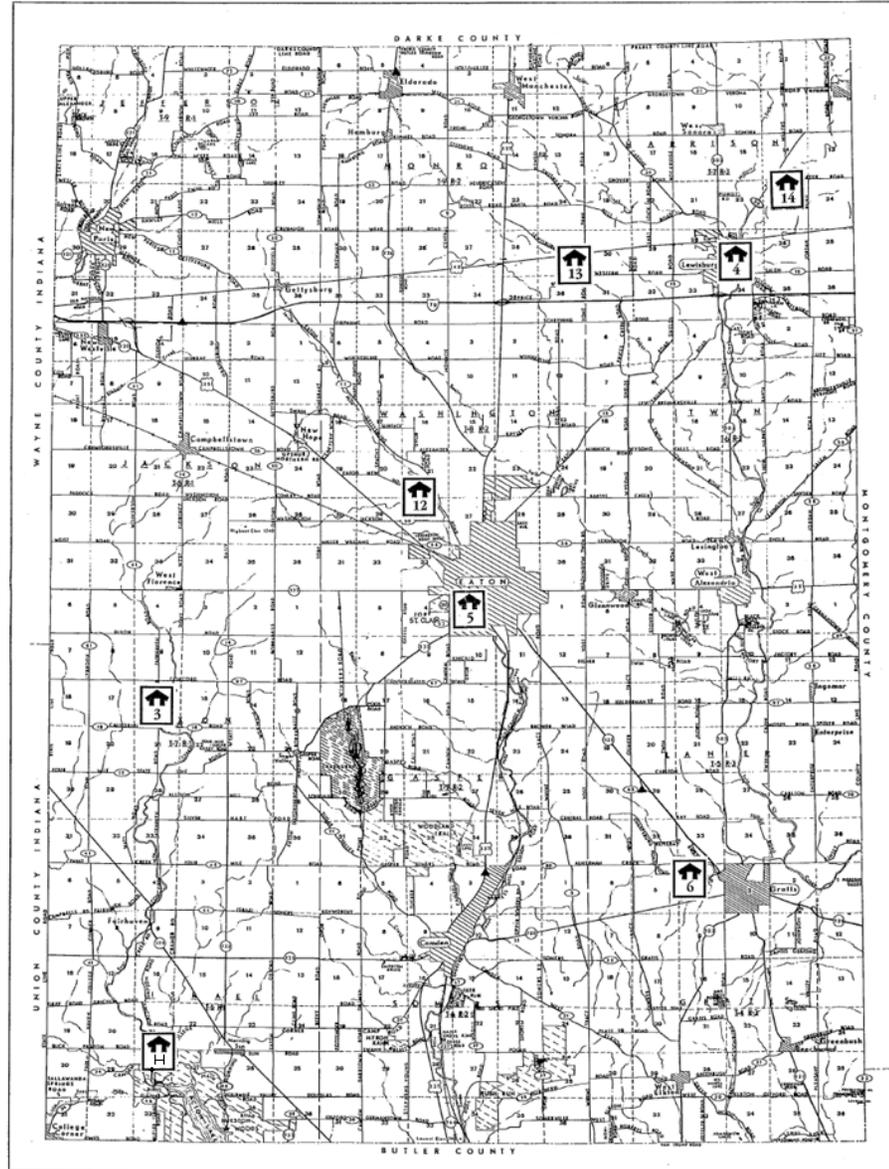


Harshman Covered Bridge



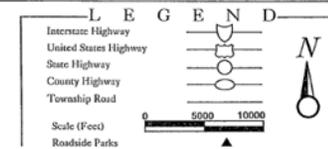
Geeting Covered Bridge

Map



COVERED BRIDGES

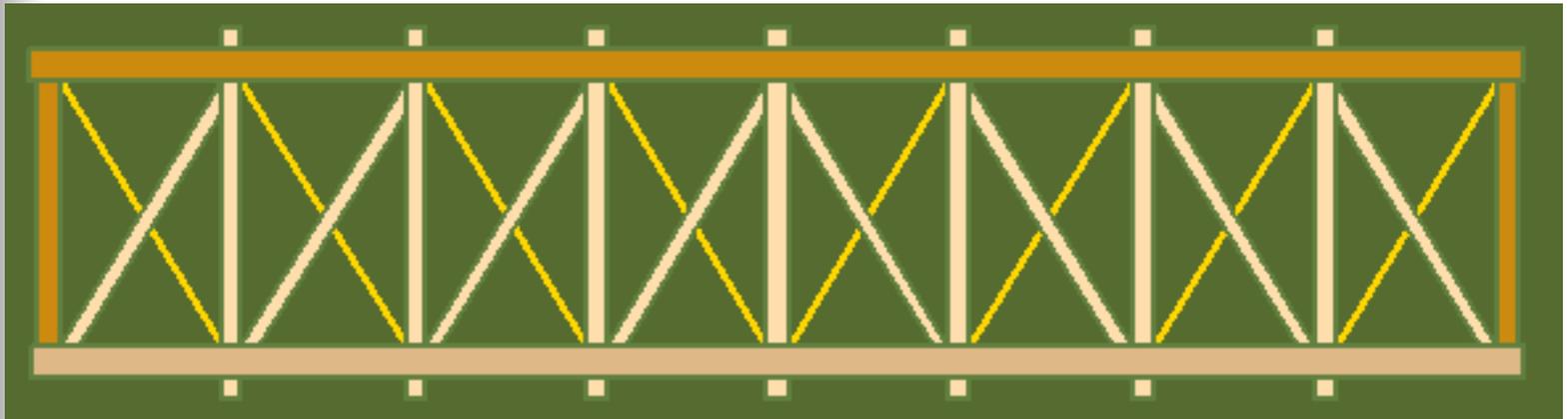
- No. 3 Harshman Covered Bridge 1894 Concord-Fairhaven Road, Dixon Twp.
- No. 4 Dixon Branch Covered Bridge 1887 (Relocated 1964) Lewisburg Community Park
- No. 5 Roberts Covered Bridge 1829 (Relocated 1991) Beech Street, Eaton
- No. 6 Brubaker Covered Bridge 1887 Aukerman Creek Road, Gratis Twp.
- No. 12 Christman Covered Bridge 1895 Eaton-New Hope Road, Washington Twp.
- No. 13 Geeting Covered Bridge 1894 Price Road, Monroe Twp.
- No. 14 Warack Covered Bridge 1895 Swamp Creek Road, Harrison Twp.



Child's Truss

Childs (C) Truss

Developed in 1846 by Horace Childs, the Childs truss was used exclusively after 1883 by Ohio bridge builder Evret Sherman. The truss simply added diagonal iron rods to a multiple kingpost design.



Brubaker Bridge



BEFORE



AFTER

Harshman Bridge



BEFORE



AFTER

Christman Bridge



BEFORE



AFTER

The question of whether to build wood or iron bridges was debated in the county and Christman bridge was built amidst a storm of controversy. The 100 foot Bridge was built in 1895 and named from Solomon Christman who owned the farm south of the location. This bridge was constructed for a total cost of \$2,452.

Geeting Bridge



BEFORE



AFTER

Built in 1894 by Everett Sherman, the Geeting Covered Bridge spans 100 feet long, 15 feet wide, with a clearance of 13 feet over Price's Creek. A previous rehabilitation was completed in 1973. In August of 1975, the bridge was posted on the National Register of Historical Places.

Warnke Bridge



BEFORE



AFTER

Covered bridge building in Preble County and Evret Sherman's career ended about the same time. While he was building the Christman bridge, he was given the task of repairing the bridge over Swamp Creek, on Swamp Creek Road. The little iron pony-truss bridge that stood there had been badly damaged by a flood in 1895. The "repairing" included building an entirely new structure from the ground up.

Sherman cleaned out his bridge yard on North maple Street in Eaton to get material for the 51 foot structure, finishing it in early 1896. His health was failing and he moved to Richmond, Indiana where he soon passed away.

Restoration Photos



BRUBAKER BRIDGE



WARNKE BRIDGE



CHRISTMAN BRIDGE



HARSHMAN BRIDGE



GEETING BRIDGE

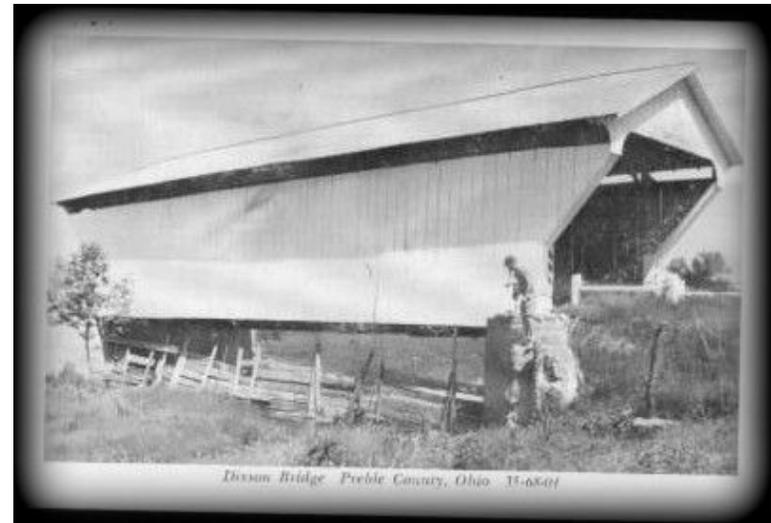


Dixon Branch



Eli Dixon was the first settler in the township which bears his name, Dixon. Eli moved from Georgia and settled in Ohio in 1804. Little is known about him, besides the fact that he was a captain in the Ohio Militia.

Originally, this covered bridge spanned Dixon Branch in Dixon Township. In 1963, a windstorm severely damaged this covered bridge. Preble County officials gave it to the Civitans of Lewisburg. They relocated it to Civitan Park in 1964.



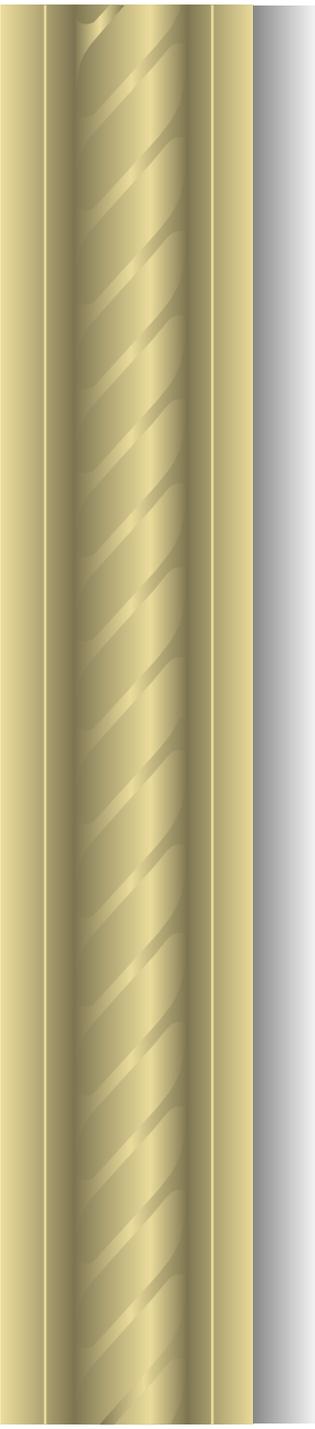
PROJECT COSTS

	1887	2006	DIFFERENCE
BRUBAKER	\$2,408	\$330,000	\$327,592
	1894	2008	
HARSHMAN	\$3,184	\$363,781	\$360,597
	1895	2008	
CHRISTMAN	\$1800	\$331,093.75	\$329,293.75
	1894	2008	
GEETING	\$2,691	\$379,753	\$377,062
	1895	2008	
WARNKE	\$923	\$240,924.25	\$240,001.25
	1829	1990	
ROBERTS	?	\$?



MAINTENANCE ISSUES WITH COVERED BRIDGES

- **Repairs are isolated but can be difficult to access**
- **Bolts need to be monitored for tightness**
- **Runners are sacrificial**
- **Stain vs. Paint**
- **Water and Rot primary concerns with a timber structure**
- **Different species of timber for different applications**
- **QC more difficult because of unseen irregularities and often leads to over sized members**



HUESTON WOODS COVERED BRIDGE

- Federal funding approval in 2007 for 95% of construction costs.
- Construction began Labor Day 2011
- Opened Memorial Day 2012
- Dedication ceremony was June 24, 2012

Hueston Woods Covered Bridge



Hueston Woods Covered Bridge



KRAMER
A DIVISION OF



HUESTON WOODS COVERED BRIDGE

- HL-93 Loading based on LRFD Design
 - 2 Legally loaded trucks can pass on bridge
- 108' span, 49' total width, 28'6" to peak of roof
- 30 H-Piles totaling 1707 l.f., 550 c.y. ODOT Class C concrete and 40,000 lb. epoxy coated reinforcing steel in each abutment
- Nearly 80,000 board feet of timber used in construction
- Glue laminated arches weigh 70,000 pounds each











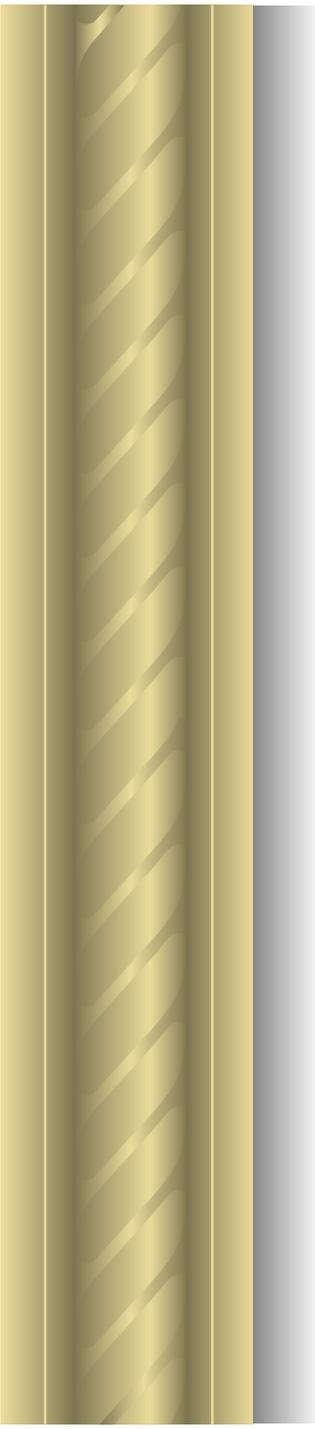












KEYS TO SUCCESS

- Have a clear vision to guide the project
- Meet with Stake holders
 - ODNR/Hueston Woods State Park
 - Historical Society
- Open Dialogue with Consultant, Contractor and ODOT



QUESTIONS?

Contact Information

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