OHIO DEPARTMENT OF TRANSPORTATION

HISTORIC BRIDGE SURVEY REPORT

NO ATTACHMENT

6/9/2011

SFN #: 2530139 **County:** FRANKLIN **Municipality:** WESTERVILLE

NR Rec: **Eligible** **Previous Inventory/Date:** **Status:** Select

---

ODOT District: **Owner:** COUNTY **Lat/Long:** /

Location: WESTERVILLE **UTM:**

Feature On: WESTERVILLE BIKEWAY

Feature Intersected: ALUM CREK

Type: THRU TRUSS **Design:** DOUBLE INTERSECTION PRATT (WHIPPLE)

Material: METAL

Railing Type:

 # Spans: 1 **Overall Length:** ft. **Out to Out Width:** ft. **Roadway Width:** 0 ft.

Year Built: 1888 **Alteration (Date):** MOVED 1999 **Source:**

Designer/Builder COLUMBUS BRIDGE CO (COLUMBUS, OH)

Setting/Context:

The bridge carries a pedestrian trail/bike path over a stream in Westerville.

Physical Description:

Integrity:

Relocated from Beach Road over Big Darby Creek in 1999.

Summary of Significance:

The pin-connected double-intersection Pratt thru truss bridge was relocated in 1999. It retains its integrity of design and materials. It is a technologically significant example of its type/design, fabricated by a local bridge company. The eligible recommendation of the prior inventory remains appropriate.

Double-intersection Pratt trusses, also known as Whipple or Murphy-Whipple trusses, were among the most successful of long-span thru truss designs (up to 300' long) of the 1860s to 1890s for both railroad and vehicular crossings. Surviving examples are uncommon nationally and considered technologically significant; Ohio with at least 14 identified examples dating from 1881 to 1898 (Phase 1A survey, 2008) has a very high number in comparison to most other states. The truss design is characterized by diagonals that extend over two panels. In 1847, Squire Whipple, one of America's foremost bridge engineers, developed the design figuring that the double-intersection configuration increased the depth of panel without altering the optimal angle of the diagonals, thus allowing for increased span length. His design was further refined in 1859 by John W. Murphy, the talented chief engineer of Pennsylvania's Lehigh Valley RR, who substituted wrought-iron pins for cast-iron connecting pieces, thus developing the connection detail that would prove to be advanced construction practice for this and other truss designs for the next several decades. Ohio's surviving examples, which mostly date to the 1880s, were not cutting edge for their time, but they show how the form had evolved into the preferred long-span thru truss design of the period. Most have documented associations with prominent Ohio-based fabricators.

Reviewed By/ Date: JPH (2/08)

Notes:

Relocated to City of Westerville in 1999. Award October 31, 2000.

For Eligible Bridge:

OHIO DEPARTMENT OF TRANSPORTATIO

HISTORIC BRIDGE SURVEY REPORT

SFN #: 2530139 **County:** FRANKLIN **Municipality:** WESTERVILLE

NR Rec: **Eligible** **Previous Inventory/Date:** **Status:** Select

---

Level of Significance: High

Justification:

There are 13 examples of the bridge type important to the development and maturation of the pin-connected thru truss bridge. They date from 1881 and concentrate in the 1880s. Even though there are more than 12 extant examples in Ohio, each built in the 1880s has high significance based on overall scarcity (everywhere but in Ohio) of the design. This is a major and technologically significant bridge type. The bridge has high significance.

In Management Plan (2009)? No