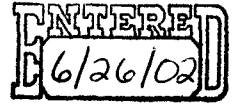


United States Department of the Interior
National Park Service



NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

Historic name West Orange Road-Thomas Bridge
Other names/site number Orange Road Bridge; Thomas Road Bridge; Structural File #2132184; DEL-15-15

2. Location

street & number Twp. Rd. 114 immediately east of junction with S.R. 315 not for publication
city or town Powell vicinity
state Ohio code OH county Delaware code 041 zip code 43015

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. See continuation sheet for additional comments.)

Bautrus P. ... Dept. Head Planning, Inventory and Registration Date May 3, 2002
Signature of certifying official Date
Ohio Historic Preservation Office -- OH SHPO

State or Federal agency and bureau
In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of commenting or other official Date
State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:
 entered in the National Register determined not eligible for the National Register
 See continuation sheet. removed from the National Register
 determined eligible for the National Register other (explain): _____
 See continuation sheet. Signature of Keeper Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
1		buildings
		sites
		structures
		objects
1	0	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

TRANSPORTATION/road-related/bridge

Current Functions

(Enter categories from instructions)

TRANSPORTATION/road-related/bridge

7. Description

Architectural Classification

(Enter categories from instructions)

Other: Pratt through truss

Materials

(Enter categories from instructions)

Foundation	Sandstone
roof	N/A
walls	N/A
other	Steel

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- Criteria A, B, C, D with checkboxes. C is checked.

Criteria Considerations

(Mark "X" in all the boxes that apply.)

Property is:

- Criteria A, B, C, D, E, F, G with checkboxes.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)

- Criteria for bibliography with checkboxes. One is checked.

Areas of Significance

(Enter categories from instructions)

Engineering

Period of Significance

1898 - 1950

Significant Dates

1898

1913

Significant Person

(Complete if Criterion B is marked above)

Cultural Affiliation

N/A

Architect/Builder

Toledo Bridge Company

Primary location of additional data:

- Criteria for primary location with checkboxes. Local government is checked.

Name of repository: Delaware County Records Center

10. Geographical DataAcreage of Property less than one acre**UTM References**

(Place additional UTM references on a continuation sheet)

Zone Easting Northing

1 17 325820 4449000

2 _____

Zone Easting Northing

3

4

 See continuation sheet.**Verbal Boundary Description**

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared Byname/title organization Judith K. Brozek, Chair, Friends of the Olentangy River date 10/1/2001; rev. 4/22/02street & number 944 W. Orange Road telephone 740-548-6828city or town Delaware state OH zip code 43015**Additional Documentation**

Submit the following items with the completed form:

Continuation Sheets**Maps**A **USGS map** (7.5 or 15 minute series) indicating the property's location.A **Sketch map** for historic districts and properties having large acreage or numerous resources.**Photographs**Representative **black and white** photographs of the property.**Additional items**

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name Mr. Chris Bauserman, Delaware County Engineerstreet & number 50 Channing St. telephone 740-833-2400city or town Delaware state OH zip code 43015

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 7 Page 1

**West Orange Road-Thomas Bridge
Delaware County, OH**

Description (Photo numbers in parentheses)

The West Orange Road-Thomas Bridge is a steel, 9-panel, pin-connected, Pratt through truss bridge (1) crossing the Olentangy Scenic River on Township Road 114 (2) in the Olentangy Heritage Corridor (Ohio Scenic Byway) in southern Delaware County. The bridge is 182 feet long with a 180-foot clear span; the roadway is 16 feet wide (3); and the trusses are 27 feet high. The original engineering drawings of the superstructure and substructure are included as Attachment A and Attachment B, respectively.

The compression-member truss work includes the battered end posts (4), the top chord (5), and 27-foot-long verticals (6), and are built-up members of channels, plates, and latticework, all shop-riveted.

The diagonal tension elements are square bars that vary in dimension from end panels to center (6). The lower chord consists of pairs of eyebars that vary in dimension from center to end panels. The first 2 panels of the lower chord are reinforced with latticework (7) to account for stress reversals. This unusual feature might have been included to compensate for the vaulting effect of vehicles as they leave the quite steeply inclined approaches and land on the bridge itself.

The overhead horizontal bracing consists of channels and latticework (8). Intermediate horizontal lattice bracing is positioned 16 feet from the deck surface (9). Sub-floor bracing consists of 1.5-inch diameter rods, running diagonally (10) between the floor beams.

Latticework guardrails (11) that are approximately 2 feet in height run from end post to end post. A cast iron nameplate is present on the right battered end post of each portal. The west plaque (12) states "Toledo Bridge Co. 1898 Toledo, O." The east plaque (13) lists the names of the three Delaware County Commissioners (D. Waldron, J. C. Kirkpatrick, R. J. Pumphrey) and the County Deputy Engineer (J. B. Taggart).

The only addition to the superstructure occurred in 1970 as part of a "major rehab." As shown on Attachment C, the four hip verticals (first vertical members beyond the portals) were reinforced with the addition of an approx. 32-foot long, 1.25-inch diameter vertical rod between each pair of 2-inch x 5/8-inch vertical square bars (14). This metal rod is looped around the connecting pin and welded to itself approximately 2.0 – 2.5 feet from the pin in the upper and lower chords.

The deck consists of timber with bituminous wearing surface.

The substructure, originally built by McDonald & Cook, is sandstone (15). The west abutment (16) is as originally constructed. The east abutment (17) was faced with concrete in the 1980's. (Note: According to Fred L. Stults, retired Delaware County Engineer, the abutments were not faced with mesh in 1970 as called for on Attachment D. Photo 16 confirms that this work did not take place.)

According to ODOT records, the bridge underwent a "major rehab" in 1970 (Attachments C & D). During this project, the Ohio Bridge Company of Cambridge, Ohio was hired to jack up the bridge, remove the old bridge seats, and add new ones (concrete reinforced with steel); they also replaced the stringers. On Jan. 14, 2002, Ohio Historic Bridge Association President David A. Simmons reviewed the "rehab" engineering drawings to assess whether the work done negatively

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number 7, 8 Page 2

West Orange Road-Thomas Bridge Delaware County, OH

Description (continued)

impacted the historical significance of the structure. He stated, "This project would be considered standard bridge maintenance. They simply replaced the wearing surface and the stringers supporting it; but none of the structure—or historical significance—was altered."

On Dec. 25, 2000, a single-vehicle accident damaged a panel of the south guardrail, causing the bridge to be temporarily closed until repairs were completed in Jan., 2001. This section of guardrail is now heavily rusted. The rest of the structure is in good condition. Historic bridge specialist David A. Simmons visited the bridge in March, 2001 and "...was struck by the remarkable condition of this structure. Totally absent was the pack rust and corrosion that has led to section loss in many structures that are 100+ years old. I was truly astounded, based on my brief visual inspection, at the quality of the lower chord. In many historic bridges I have inspected, this member is often seriously deteriorated from deicing chemicals. My initial thought is that this bridge is an outstanding candidate for preservation and continued use." (Ohio Historic Bridge Association letter, 3-18-01)

Statement of Significance

Name Preference

Orange Road is given preference in the name because this road to Orange Station was built in 1844-5 (east portion) and 1851 (west portion), approximately fifty years before the building of the subject bridge. (Delaware County Road Record, Vol. 2.) Research has proven that the road on which the subject bridge is located has had at least four different names between pre-1850 and 1916: Clinton (East Orange Road), Thomas, Orange, Gooding. None of these names were official names except Orange Road, which remains in use today. The previously mentioned road record documents the petitioning, laying out, and approval in 1851 of what is West Orange Road today. The road was created to provide local farmers with access to the newly built railroad depot named "Orange Station" as well as a grocery store and, later, a post office at the site. This small commerce center was located on the earlier built eastern portion of the road, and is identified as "Orange" or "Orange Station" in the 1866, 1875, and 1908 Delaware County Atlases. The County Commissioners did not put an official name on the western portion of the road (where the subject bridge is located) when it was created. It appears that because the road ran through Thomas family land, common usage prevailed and, by 1898, county officials referred to "Thomas Bridge" as well as the "Bridge over the Olentangy River on Thomas Road in Liberty Township."

The Thomas name probably came into common usage after 1875 when the Orange Station depot closed; however, its usage was in conflict with an already existing Thomas Road (built in 1838 through Thomas-owned land) in Radnor Township in the northern part of the county. After the County Commissioners officially named the older road in Radnor Township "Thomas Road" in 1911 (Co. Comm. Journal, Vol. 14, Page 552), no further reference can be found to a Thomas Road in Liberty/Orange Township. The name "Orange Road" appears in Liberty/Orange Township on a 1916 county plat map on file in the County Engineers office; however, 1918 County Engineer's inspection records call the road "Gooding." Placing "Thomas" second in the subject name acknowledges its common usage; and, because it is shown without the word "road," it eliminates confusion regarding Thomas Road (Liberty/Orange Twp. vs. Radnor Twp.) by linking the name "Thomas" with the bridge as one of the County Commissioners' references in 1898 did.

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 8 Page 3

**West Orange Road-Thomas Bridge
Delaware County, OH**

Statement of Significance (continued)

The West Orange Road-Thomas Bridge, built in 1898 by the Toledo Bridge Company, is significant under Criterion C because it represents a metal through truss, a distinctive type of engineered structure that dominated highway bridge design in Ohio as well as nationwide during the late nineteenth and early twentieth centuries. Although the Historic American Engineering Record recognized such bridges as an "endangered species" as much as a quarter of a century ago, they continue to disappear at an alarming rate from the American landscape. The West Orange Road-Thomas Bridge represents the work of one of Ohio's most important bridge manufacturers in the late nineteenth and early twentieth century. Engineering details unique to this bridge led to its surviving Ohio's catastrophic 1913 flood. Locally, this bridge is recognized as a historic landmark.

The design of the Pratt through truss bridge was patented by Thomas and Caleb Pratt in 1844. Due to their reliability, safety, and economy, Pratt through truss bridges became the "standard" in not only Ohio's but the nation's transportation infrastructure. The "...repeated patterns found in the component parts of the metal truss bridges built in the late nineteenth century were schemes to reduce costs through standardization." Pin-connected bridges, such as the West Orange Road-Thomas Bridge, "...could be constructed quickly, easily, and inexpensively with the disassembled components shipped to the construction location, and put together on-site." (David A. Simmons, "Ohio Bridges from 1850 to 1950...", pg. 103.)

According to the Ohio Department of Transportation's (ODOT) first Ohio Historic Bridge Inventory, Evaluation and Preservation Plan (1983), 510 Pratt through truss bridges (different manufacturers) were identified statewide. Figures for 2001 show the number has been reduced to 168. Ohio's Pratt through truss bridges have been removed at an average of 20 per year over the past 17 years, a reduction of 67%. In the original statewide bridge inventory, the West Orange Road-Thomas Bridge (SFN 2132184) was given "Reserve Pool" status. Due to the dwindling numbers of structures of this type, the West Orange Road-Thomas Bridge was elevated to "Selected" status in February, 1998, making it one of 11 Pratt through truss bridges in Ohio that ODOT agrees are eligible for the National Register.

The Toledo Bridge Company was incorporated in Toledo, Lucas County, Ohio, March 26, 1891 (recorded March 31, 1891) for the purposes of "...manufacturing and constructing bridges and structural iron and steel works." (Source: OHS Bridge Files—Ohio, Secretary of State, Records of Incorporation, Vol. 52.) The company remained in business until 1901. The company's origins can be traced to the Smith Bridge Company, one of a handful of Ohio-based and "nationally prominent" bridge companies. In 1867, R. W. Smith, founder of Smith Bridge Company, secured patents for the construction of wooden bridges. As technology changed, the company evolved by adding facilities for producing iron parts to be used on wooden bridges, then to making complete structures of iron in the early 1880's. Finally, in the late 1880's and early 1890's, the company gradually shifted to the manufacturing of steel bridges. About 1890, the Smith Bridge Company was sold to new parties, and took on the name, Toledo Bridge Company.

ODOT has only been able to identify five Toledo Bridge Company bridges of any type remaining in the State. The West Orange Road-Thomas Bridge is one of only two ODOT-identified extant Pratt through truss bridges built by the Toledo Bridge Company. The other is on County Road 53 in Hancock County. According to Steven C. Wilson, Hancock County Engineer, it is now closed to traffic and slated for removal. (Wilson interview 2/25/02)

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 8 Page 4

**West Orange Road-Thomas Bridge
Delaware County, OH**

Statement of Significance (continued)

"Thomas Bridge," the former wooden bridge at the subject site, is listed in the 1898 Delaware County Commissioners' Journal (June Session) as one of 27 bridges to "... have been destroyed by flood, or to have become dangerous to public travel by reason of damage." To replace the damaged or destroyed bridge, the County Commissioners, on August 20, 1898, awarded the Toledo Bridge Company the contract for a new "single square through steel bridge 180 feet C to C; 27 feet in height; roadway 16 feet in the clear; 9 panels; 3 inch burr and white oak floor" for "Thomas Road over the Olentangy River, Liberty Twp." Attachment E (1900 plat map) shows the location of this bridge.

The engineering significance of the West Orange Road-Thomas Bridge is a result of a specific feature that relates to the design concerns of county officials. This bridge represents the work of the Delaware County deputy surveyor/engineer—John B. Taggart. Recognizing that the floodplain was very broad at this site on the Olentangy River, Taggart designed 24-foot abutments to elevate the structure above potential floods. He also designed a superstructure whose lower chord accommodated stress reversals, a potential problem in a structure with such high abutments. Dealing with this issue, Taggart reinforced the two end panels with latticework, a feature that is more typical of railroad bridges. The astute engineering of this county official allowed the bridge to survive the next flood in March, 1913, which was, at that time, Ohio's most devastating flood on record. For this reason, 1913 is considered a date of significance.

Both state and county records concur that the West Orange Road-Thomas Bridge was not damaged or destroyed in the 1913 flood. Through analysis of these records and 1908 Delaware County plat maps, it is believed that this bridge was the only bridge in Delaware County not damaged or destroyed by the flood in the approximately 22-mile stretch of the Olentangy River (from ten miles north of the City of Delaware to the Delaware/Franklin County line). The height of the abutments, which elevated it above the floodwaters, is thought to have been a major factor in its survival and is testimony of the foresight of the local deputy engineer. In addition, similar analysis of Franklin County bridges indicates that all bridges from the northern county line to the confluence of the Olentangy and Scioto Rivers in Columbus were damaged or destroyed. As a result, it is believed that the West Orange Road-Thomas Bridge was the only bridge of 23 bridges on approximately 35 miles of the Olentangy River in Delaware and Franklin Counties that was not damaged or destroyed during the State's greatest recorded disaster. The West Orange Road-Thomas Bridge undoubtedly played an important role in local communications in the wake of the flood.

The one-lane West Orange Road-Thomas Bridge is also significant locally because it is a part of the Olentangy Heritage Corridor (OHC), designated as a State Scenic Byway in March 1998. ODOT designated this byway for its outstanding historic, scenic, and natural qualities. The OHC Byway Management Plan calls for the preservation of this bridge. In addition, the bridge is specifically listed as a locally historic landmark in the Comprehensive Plan of Liberty Township. A Plan objective regarding "Access and Circulation" states, "Improve bridges across the Olentangy River, except for designated historic bridges, in a manner consistent with the scenic river."

At its Spring, 2001 meeting, the Ohio Historic Bridge Association passed a resolution recommending the preservation of this bridge. Although the bridge remains in use today, the Delaware County Engineer has begun a process that could potentially remove it from service.

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 8, 9 Page 5

**West Orange Road-Thomas Bridge
Delaware County, OH**

Statement of Significance (continued)

Special Note: Previous, incorrect information has caused confusion regarding the original location of this bridge. The original Ohio Historic Inventory for this bridge was completed by the Ohio Historical Society in July, 1976. This inventory did not make any statement regarding the bridge's original location; however, the Ohio Department of Transportation revised the form in February, 1979 and stated "Structure originally located on the Mt. Vernon Road over Big Walnut Creek. Contract awarded to Toledo Bridge Company on June 17, 1898 for \$2,287.00." and cited the County Commissioners Journals 1896-1900, Vol. 11, page 257.

Research for this National Register application has proven that the 1979 ODOT research is incorrect. It appears that ODOT's research identified the first of several bridge contracts awarded to the Toledo Bridge Company in 1898, that being the July contract for the Mt. Vernon Road Bridge. In fact, the contract for the "Thomas Road Bridge" was awarded to the Toledo Bridge Company on August 20, 1898 for \$4,180.00. This information is found on page 282 of the source identified by ODOT. In addition, a researcher who was unfamiliar with the pioneer families of the Olentangy River Valley would not know that the Thomas family once owned the land on both sides of the subject bridge.

Bibliography

Combined Atlases and Wall Maps—1849, 1866, 1875, 1908—Delaware County, Ohio, Delaware County Historical Society, Windmill Publications, Inc., Mt. Vernon, IN (reproduction and compilation of original maps).

Bridge Files, Ohio Historical Society (compiled by David A. Simmons, OHS).

Commissioners' Journals, Delaware County, Vol. 11 (1896–1900), pp. 282, 338, 343, 351, 377; Vol. 14 (incl. 1911), p. 552; Vol. 15 (incl. 1913), p. 182, located at Delaware County Records Center.

Comprehensive Plan of Liberty Township, Delaware County, Ohio, pp. 7 & 28, adopted October, 25, 1989, amended January 27, 1993, August 30, 1995.

Delaware County Engineers Office, "State Roads" file (1916 plat map); original 1898 engineering drawings of bridge; original 1969 engineering drawings of bridge rehab project; 1918 bridge inspection records.

Delaware County Map Department, 1900 plat map, Delaware County Courthouse.

Delaware County Roads Book 2, pp. 470-472, located at Delaware County Records Center.

"List of County Bridges Damaged or Destroyed by Flood, March 1913," State of Ohio Publication, 1913, The Ohio Historical Society Library.

"Notice of Bridge Letting, " Delaware Daily Gazette, July 23, 1898 & Notice of Bridge Contract, Delaware Daily Gazette, August 20, 1898, located at Delaware County Historical Society.

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 9, 10 Page 6

**West Orange Road-Thomas Bridge
Delaware County, OH**

Bibliography (continued)

Ohio Department of Transportation: The Ohio Historic Bridge Inventory, Evaluation and Preservation Plan, Columbus, ODOT, 1983 & The Second Ohio Historic Bridge Inventory, Evaluation and Preservation Plan, Columbus, ODOT, 1990.

Ohio Department of Transportation documentation supplied to Judith K. Brozek by Thomas Barrett, ODOT-OES, September 7, 2001 and Kathy Keller, ODOT-Office of Structural Engineering, September 11, 2001.

Olentangy Heritage Corridor State Scenic Byway Management Plan, Delaware & Franklin Counties, Ohio, pp. 16, 19, 52, 58, March 1998, 2001.

"Orange Road Bridge," Ohio Historic Inventory—Bridge Inventory Form, Ohio Historic Preservation Office, Columbus, Ohio, July, 1976; revised February 3, 1979.

Scribner, Harvey, ed. Memoirs of Lucas County and the City of Toledo, Vol. 1, p. 549, Madison, Wisconsin, Western Historical Association, 1910.

Simmons, David A., "Ohio Bridges from 1850 to 1950: Reflections of Society," The Old Northwest, Vol. 12, Miami University, Spring, 1986.

Simmons, David A., Personal interview by Judith K. Brozek at Ohio Historical Society, Sept. 24, 2001 and Jan. 14, 2002.

Simmons, David A., Visual Inspection of Orange Road Bridge, March 14, 2001. A brief summary of this inspection is included in a letter dated March 18, 2001 from David A. Simmons, President, Ohio Historic Bridge Association to Delaware County Engineer.

Stults, Fred L., Delaware County Engineer in 1969, Personal telephone interview by Judith K. Brozek, Jan. 8, 2002.

Wilson, Steven C., P.E., P.S., Hancock County Engineer, Personal interview at Hancock County Engineers Office, Findlay, OH by Judith K. Brozek, Feb. 25, 2002.

Verbal Boundary Description

The West Orange Road-Thomas Bridge is located in the U. S. Military District (USMD): Range 19, Township 3, Section 4, Lot 1 (eastern portion); Twp. Road 114 immediately east of junction with S.R. 315, Liberty Township, Delaware, OH.

Boundary Justification

The nominated property consists of the bridge and its abutments. The boundary is that of the external dimensions of the bridge superstructure and substructure.

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number _____ Page 7

**West Orange Road-Thomas Bridge
Delaware County, OH**

Additional Documentation—Photographs

The following information applies to all photographs:

Name of photographer: Jeffrey D. Hamilton

Date of photographs: Sept.–Oct. 2001

Location of original negatives: Friends of the Olentangy River, 944 W. Orange Rd., Delaware, OH 43015

Description of Views:

- # 1. Clear span bridge, looking north
- # 2. West Orange Road (TR 114) and bridge, looking west
- # 3. Close-up of bridge, looking west
- # 4. NE end post
- # 5. N top chord
- # 6. Vertical trusses and diagonal tension members
- # 7. Eyebars reinforced with latticework
- # 8. Overhead horizontal bracing
- # 9. Intermediate horizontal lattice bracing 16 feet from deck
- #10. Sub-floor bracing (diagonal)
- #11. Latticework guardrail
- #12. SW end post nameplate
- #13. NE end post nameplate
- #14. Alteration: addition of rod between pair of vertical bars (far right)
- #15. NW side of limestone abutment
- #16. W abutment
- #17. Alteration: concrete-covered E abutment
- #18. Close-up of sub-floor bracing connection to floor beam
- #19. Close-up of bracing where intermediate horizontal bracing meets end post
- #20. Close-up of SE bearing point

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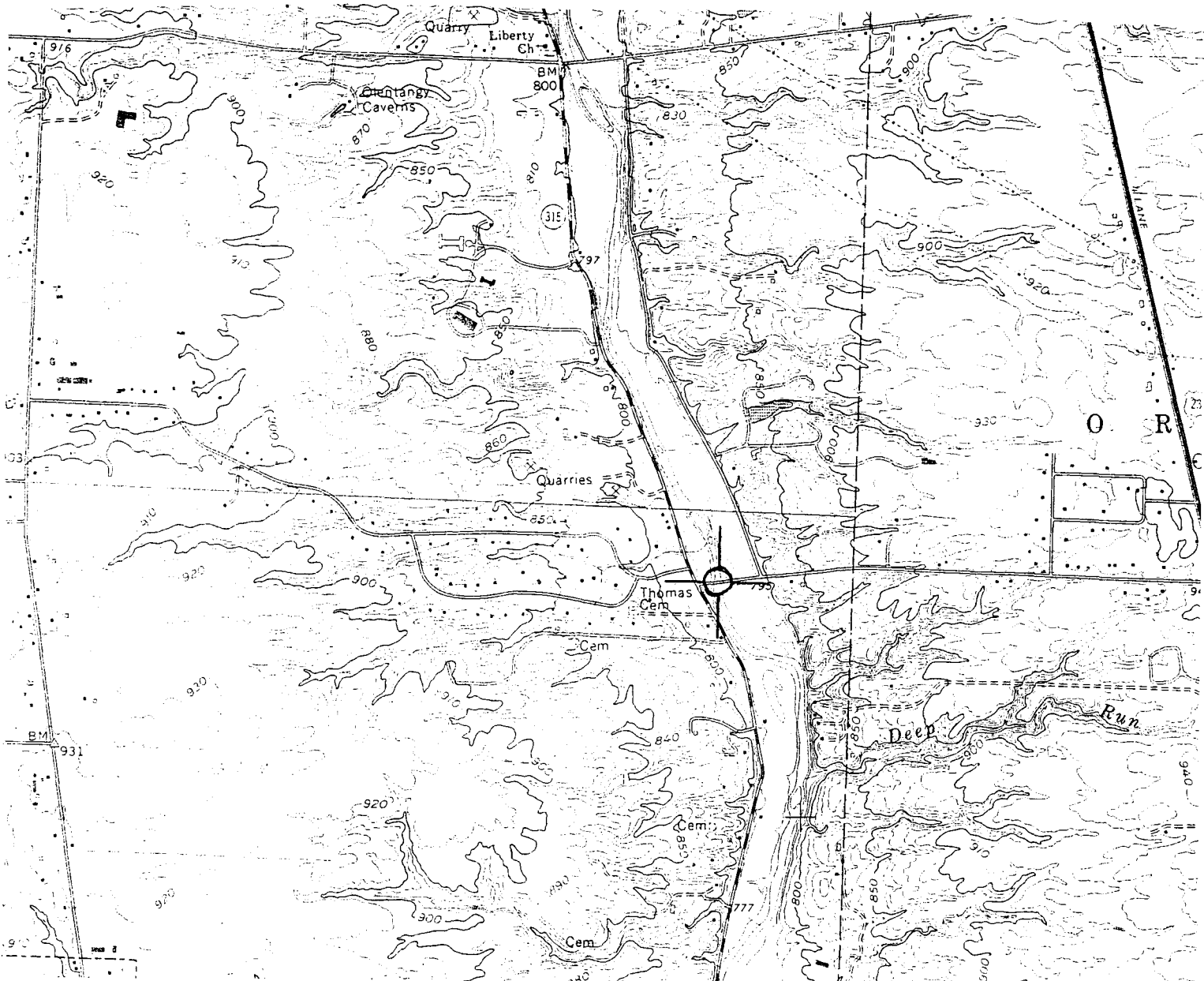
NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number _____ Page 7

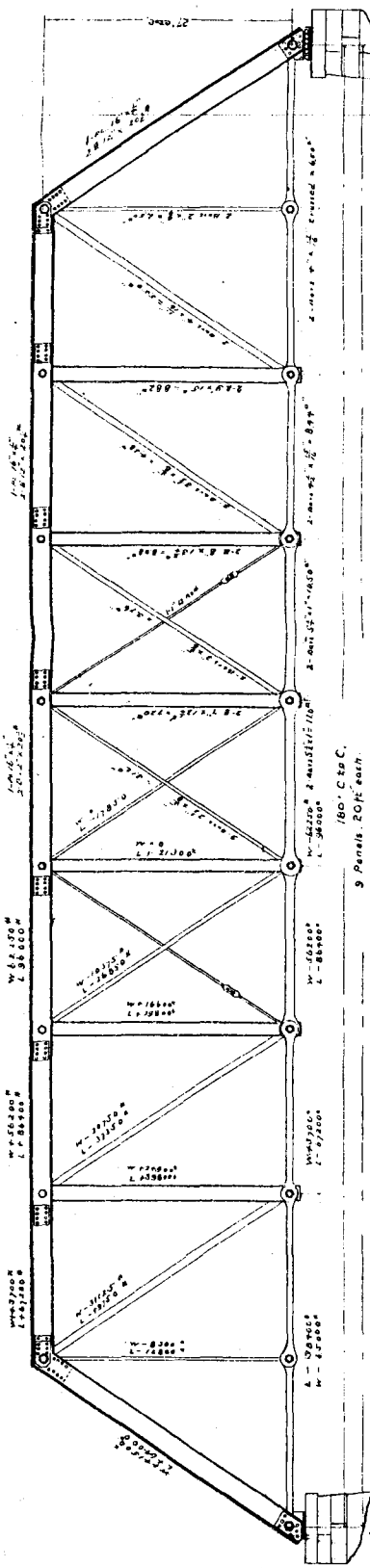
West Orange Road-Thomas Bridge Delaware County, OH

Twp. Road 114 immediately east of junction with S.R. 315
Liberty Township
Delaware, OH

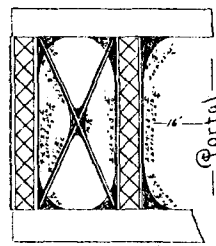
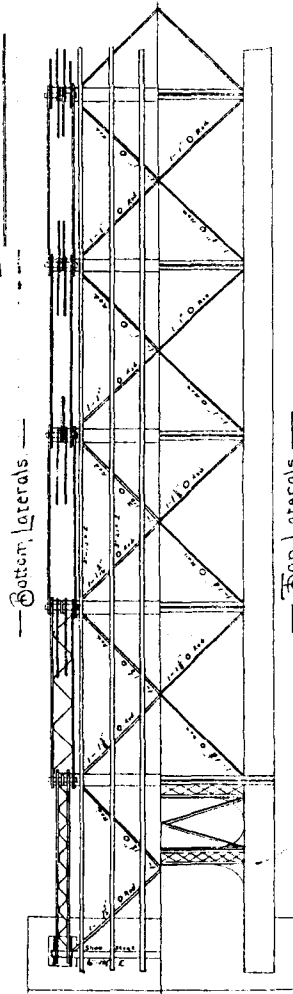
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Scale: 1:24,000
UTM Reference: 17 325820 4449000



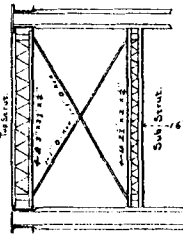
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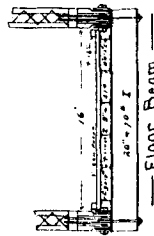
ELEVATION OF TRUSS.



Portal



Lateral Bracing.



Floor Beam.



Detail, Tub Guard.

SITE OF BRIDGE.

About 3 miles from the nearest rail-road station (POWELL) on the C. H. V. & T. R. R.

DATA FOR SUPERSTRUCTURE.

Bids are wanted for the entire Superstructure complete, erected and painted.

ROADWAY FLOOR.

- 2 lines 15'-15"
- 1 layer of 4" or 5" wire or bar oak flooring 5'-10" wide
- 1 layer of 2" or 3" concrete or brick set on 2-ribs
- Hub Guard as per drawing.

Bottom laterals must be hung to joint at the center. Top laterals must be bound together at their inter-sections. Live load per sq. ft. of roadway for trucks 100 lbs.

The bridge to be constructed of medium span heavy steel, as per standard specifications, adopted by the RESH. The complete set of detail drawings must be furnished to the County Surveyor for approval, before work on the same is begun.

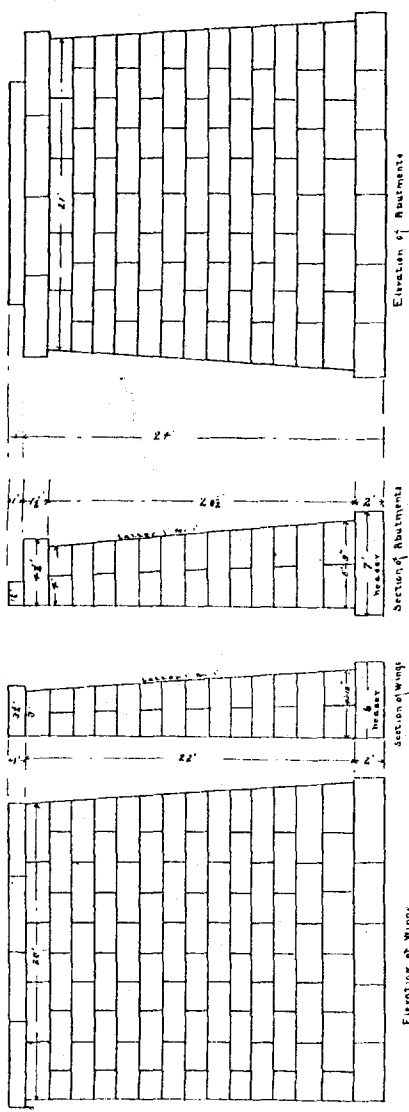
The bridge to be painted, with two coats of white lead paint, mixed with pure linseed oil. First coat to be applied in shop, second coat, after erection. Coopers 1898 specifications shall govern all points not otherwise specified.

SUPERSTRUCTURE.
BRIDGE OVER
OLENTANGY RIVER.
ON THOMAS ROAD.
LIBERTY TOWNSHIP,
DELAWARE COUNTY,
OHIO.

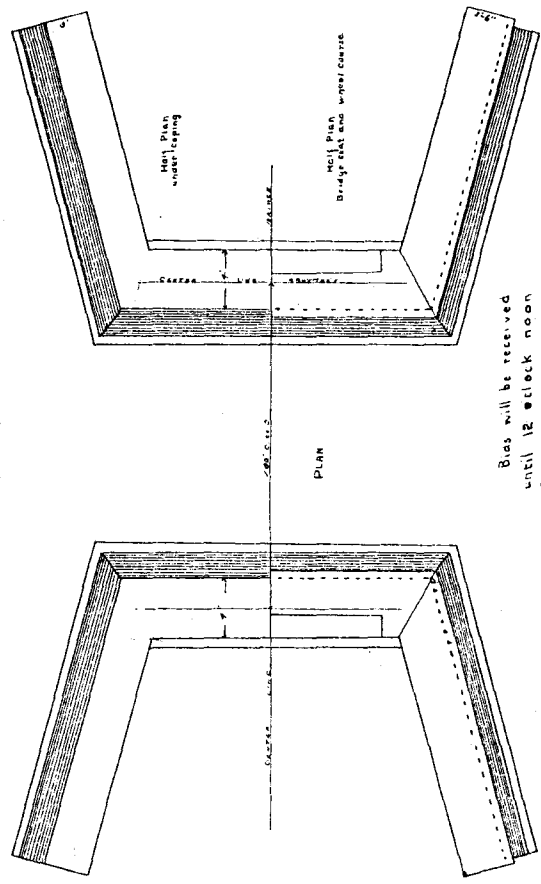
Bids will be received until 12 o'clock noon August 18th 1898. A certified check of cash in the sum of \$500.00 to accompany each bid. (See advertisement)

Approved July 1898.

J. B. Thompson
County Auditor
E. S. Mendenhall
County Surveyor



Be dimensions subject to change without extra compensation.



Bids will be received until 12 o'clock noon August 19th 1898. A certified check or cash in the sum of \$500.00 to accompany each bid (see advertisement)

Approved
S. M. Mason
 Commissioners
J. W. K. K. K.
W. J. B. B.
 County Auditor
C. S. M. M.
 County Surveyor.

Dry structure about 210 cubic yards
 masonry
 After work is completed the contractor
 used for refilling, best of water
 or waste material, to be left in place
 sufficient to maintain to a good and
 The work to be completed by Oct. 1st 1898

**SUBSTRUCTURE.
 BRIDGE OVER
 OLENTANGY RIVER.
 ON THOMAS ROAD.
 LIBERTY TOWNSHIP,
 DELAWARE COUNTY,
 OHIO**

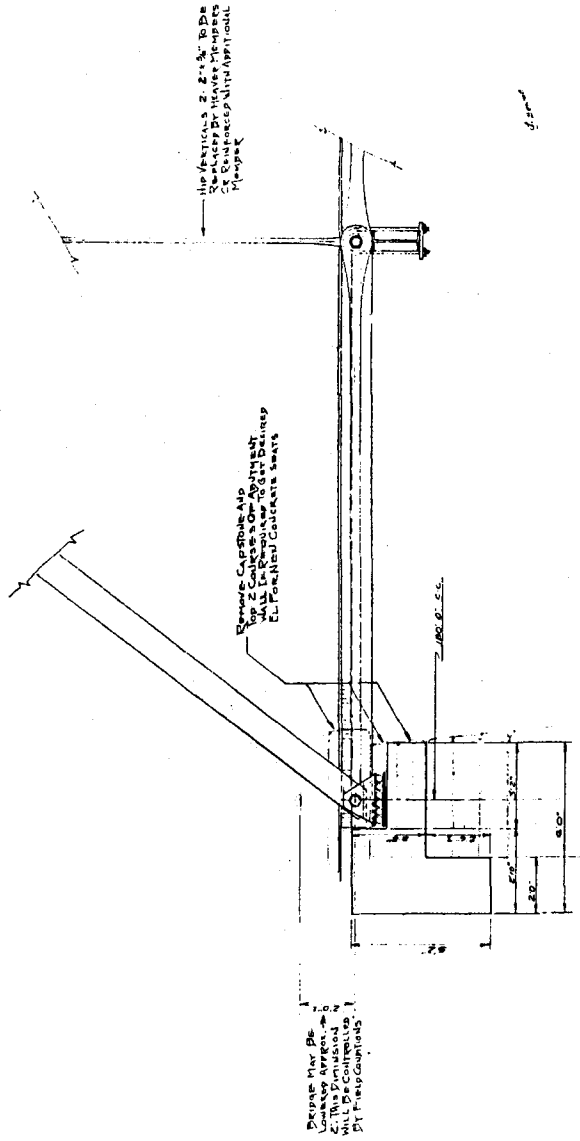
114-00-03



C

114-003

BRIDGE No 1	
LIBERTY TWP RD No 114	
FRED L. STULTS - DEL. CO. ENGR.	
K. R. REEP	DEL. CO. COMMISSIONERS
D. MILLER	
D. E. FISHER	
Drawn By	Checked By
No.	SC
DATE	1-15-03



Detail May Be
 Taken From
 This Drawing
 Will Be Considered
 As Part of the
 Project

Remove Cast-in-place
 and 2' Concrete on Right
 Wall to Provide for
 EL Forming Concrete
 Slabs

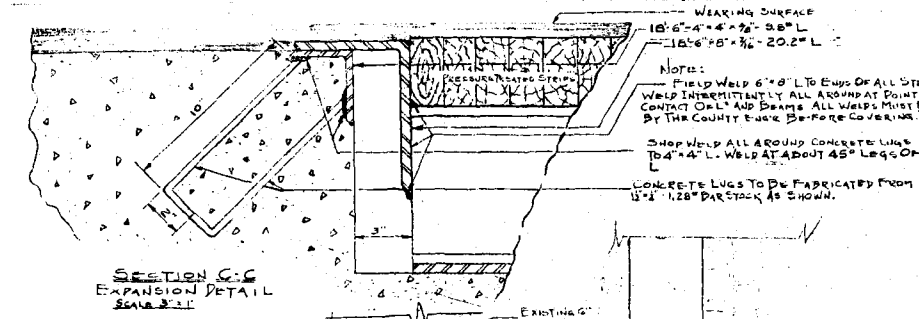
114 Verticals 2" x 3" Ribs
 Replaced by Heavy
 Reinforced Vertical
 Slabs

114-003

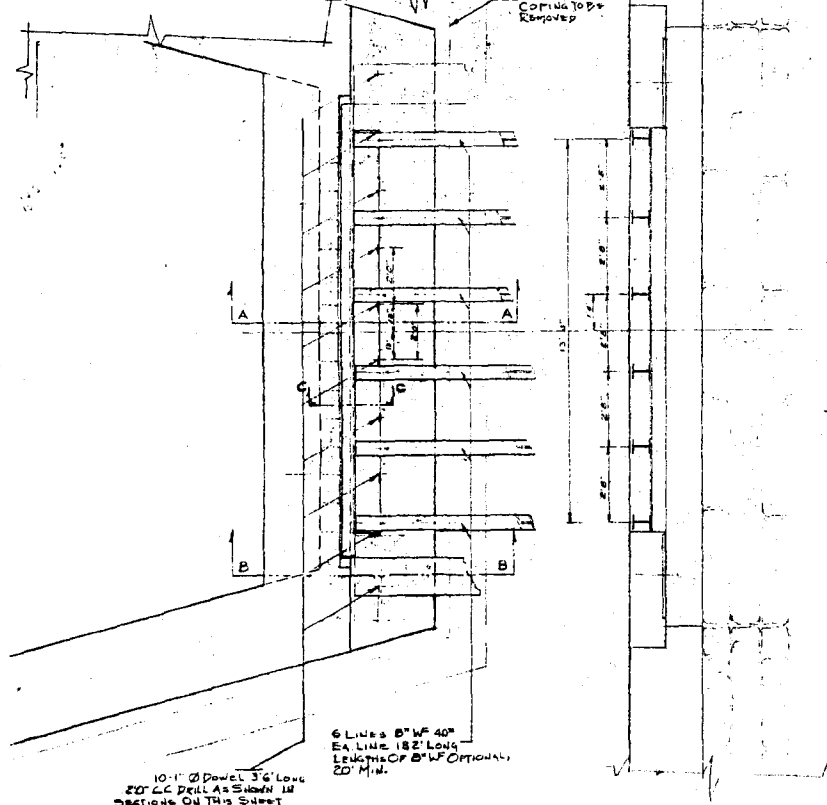
114-003

111-00,03

D

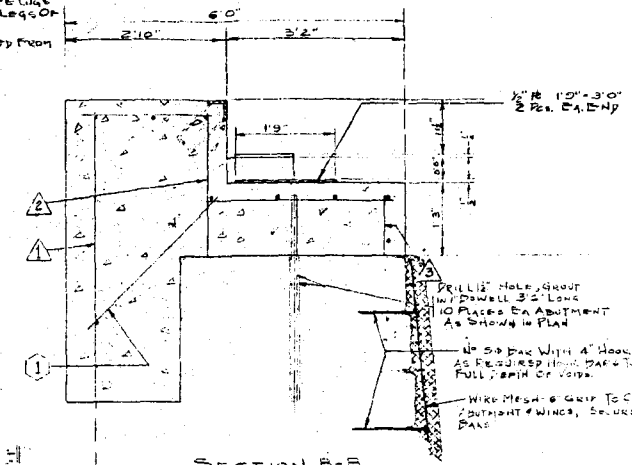


SECTION C-C
EXPANSION DETAIL
SCALE: 3/4" = 1'

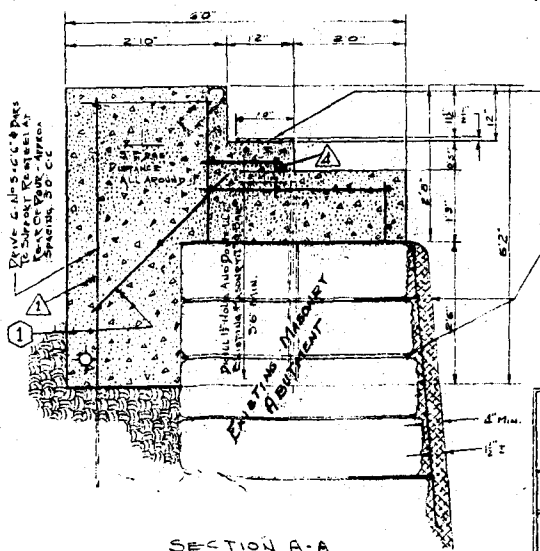


PLAN VIEW WEST E-N
EAST E-N SAME & OPPOSITE
SCALE: 3/4" = 1'

WEST ELEVATION
EAST E-N OPPOSITE
SCALE: 3/4" = 1'



SECTION D-D
SCALE: 3/4" = 1'



SECTION A-A
SCALE: 3/4" = 1'

ACCORDING TO FRED L. STULTS,
FORMER CO. ENGR., THIS WORK
WAS NOT DONE.
1/8/02 INTERVIEW
WITH J. BROBEK

ALL EXISTING VOIDS BETWEEN LAYED
STONES TO BE CLEANED USING HAND
TOOLS COMPRESSED AIR. ALL VOIDS
TO BE INSPECTED AND APPROVED BY
THE COUNTY ENGINEER BEFORE THE FIRST
APPLICATION OF PNEUMATIC MORTAR. THE
PNEUMATIC MORTAR SHALL BE APPLIED
IN TWO COURSES. THE FIRST COURSE
SHALL COMPLETELY FILL ALL VOIDS
FROM THE EXTREME DEPTH OF THE VOID
TOWARD THE FACE OF THE WALL. ALL HOOK
PARTS SHOULD BE PLACED IN CONTACT
WITH THIS COURSE. THE SECOND
COURSE SHALL ENCASE THE WIRE MESH.

BRIDGE No 1 003	
LIBERTY TWP. RD. No 114	
FRED L. STULTS-DEL. CO. ENGR.	
K. R. Reep D. MILLER Don E. Fisher	Del. Co. Commissioners
Sheet No	Designed By G.C.
Checked By	Approved
Date	12/10/00

Ohio Historic Preservation Office

567 East Hudson Street
Columbus, Ohio 43211-1030
614/ 298-2000 Fax: 614/ 298-2037

Visit us at www.ohiohistory.org/resource/histpres/



**OHIO
HISTORICAL
SOCIETY**
SINCE 1885

July 16, 2002

Mr. Chris Bauserman
Delaware County Engineer
50 Channing Street
Delaware, Ohio 43015

Dear Mr. Bauserman:

Congratulations on the recent listing of your property into the National Register of Historic Places!

The National Park Service, United States Department of the Interior listed the **Orange Road Bridge** at Township Road 114 immediately east of junction with S.R. 315 in Liberty, Ohio on June 26, 2002. The nomination was made in connection with a state plan to identify and document prehistoric and historic places in Ohio which qualify for National Register status under provisions of the National Historic Preservation Act of 1966 as amended.

The Ohio Historic Preservation Office (OHPO) is available to advise you in maintaining the historic character of your property. As you know from previous mailings received from this office, there are no restrictions placed on your property following the National Register listing. However, the OHPO strongly encourages owners of historic properties to consider all options before completing work that could damage the structure or impair its historic integrity. Careful planning can facilitate the sensitive incorporation of contemporary alterations with the historic fabric. The OHPO provides free information on how to sensitively rehabilitate and repair historic properties, upon request.

Thank you for your interest in historic preservation and the National Register of Historic Places.

Sincerely,

Barbara A. Powers
Department Head
Planning, Inventory, and Registration

Cc: Judith K. Brozek, Form Preparer
Mr. Kim Cellar, Liberty Township
Mr. James Ward, Delaware County Commissioners
Senator Bill Harris, District # 19
Representative Jon Peterson, District #80
Paul Graham, Ohio Department of Transportation