

United States Department of the Interior
National Park Service

For NPS use only

National Register of Historic Places
Inventory—Nomination Form

received JUL 23 1985

date entered AUG 23 1985

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic West Fifth Street Bridge

and/or common Route 531 Bridge/Ashtabula County Lift Bridge

2. Location

street & number SR 531 OVER Where Bridge Street spans the Ashtabula River not for publication

city, town Ashtabula vicinity of Ashtabula

state Ohio code 039 county Ashtabula code 007

3. Classification

Category	Ownership	Status	Present Use
<input type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input checked="" type="checkbox"/> occupied	<input type="checkbox"/> agriculture
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> unoccupied	<input type="checkbox"/> commercial
<input checked="" type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> work in progress	<input type="checkbox"/> educational
<input type="checkbox"/> site	Public Acquisition	Accessible	<input type="checkbox"/> entertainment
<input type="checkbox"/> object	<input type="checkbox"/> in process	<input type="checkbox"/> yes: restricted	<input type="checkbox"/> government
	<input type="checkbox"/> being considered	<input checked="" type="checkbox"/> yes: unrestricted	<input type="checkbox"/> industrial
	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> no	<input type="checkbox"/> military
			<input type="checkbox"/> museum
			<input type="checkbox"/> park
			<input type="checkbox"/> private residence
			<input type="checkbox"/> religious
			<input type="checkbox"/> scientific
			<input checked="" type="checkbox"/> transportation
			<input type="checkbox"/> other:

4. Owner of Property

name Ashtabula County

street & number 25 West Jefferson Street

city, town Jefferson vicinity of Ashtabula state Ohio 44047

5. Location of Legal Description

courthouse, registry of deeds, etc. Ashtabula County Engineer

street & number 25 West Jefferson Street

city, town Jefferson state Ohio 44047

6. Representation in Existing Surveys

title Ohio Historic Inventory has this property been determined eligible? yes no
HAER

date December 15, 1976 federal state county local

depository for survey records Ohio Historic Preservation Office
Department of Interior, NPS, HAER Office

city, Columbus Washington, D.C. state Ohio

7. Description

Condition

excellent

good

fair

deteriorated

ruins

unexposed

Check one

unaltered

altered

Check one

original site

moved date _____

Describe the present and original (if known) physical appearance

The Ashtabula West Fifth Street Bridge carries SR 531 over the Ashtabula River near the city's harbor on Lake Erie. The structure is a single leaf Mystic type bascule bridge. This type of bascule is marked by an overhead counterweight system enacted with the purpose of reducing the total weight and steel of the structure. This reduction in materials results in a savings in cost. This type of bridge is also known as a Brown balance-beam type due to its designer, Thomas E. Brown.

This design is marked by overhead counterweights which are connected to trusswork balance beams. This permits a smaller rotation of the counterweights compared to the angle of rotation exhibited by the span. This, in turn, simplifies the balance beam structure which reduces the total weight and steel, hence cost of the bridge.

The Ashtabula bascule bridge has a single leaf warren truss subdivided into four panels. This is a bridge type that has a triangular web system. The diagonals carry both tensile and compressive forces. The single leaf truss has a concrete filled buckle plate deck. The tower, rear approach and forward approach spans have reinforced concrete decks. All are reinforced with concrete substructures. There is no skew present and the alignment is tangent. The bridge presently has a HS-4 AASHTO design rating and 40% Ohio legal load rating posting of seven tons.

The hanger beams feature multiple hinges which allow the deck of the main span to rotate to a full right angle. During operation these hinges allow an arc of only 70 degrees for the counterweights located on the trussed balance beams, while the roadway and truss moves a full 90 degrees.

The overall length of the bridge is 235 feet. This includes 17 foot spans at each approach and a 45 foot tower span. These are complemented by the 156 foot single-leaf bascule truss span. The roadway width across the structure is 20 feet from curb to curb flanked by 5 foot sidewalks. The approaches consist of reinforced concrete slab and beams which support a brick and bituminous roadway wearing surface and concrete walks and railings. At the east end of the bridge is a 420 ton concrete block which serves as the counterweight. The superstructure weighs 716 tons. The structure file number of the bridge is 0406635.

There is a rehabilitation program planned for the bridge. The Richland Engineering Company of Mansfield, Ohio will be doing the design work. The project includes 1.4 million dollars of work on the surrounding area and 1.8 million for improvements of the structure itself. The bridge is situated as an entrance to the Ashtabula Harbour.

8. Significance

Period	Areas of Significance—Check and justify below			
<input type="checkbox"/> prehistoric	<input type="checkbox"/> archeology-prehistoric	<input type="checkbox"/> community planning	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> archeology-historic	<input type="checkbox"/> conservation	<input type="checkbox"/> law	<input type="checkbox"/> science
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> literature	<input type="checkbox"/> sculpture
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> architecture	<input type="checkbox"/> education	<input type="checkbox"/> military	<input type="checkbox"/> social/
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> art	<input checked="" type="checkbox"/> engineering	<input type="checkbox"/> music	<input type="checkbox"/> humanitarian
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> commerce	<input type="checkbox"/> exploration/settlement	<input type="checkbox"/> philosophy	<input type="checkbox"/> theater
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> communications	<input type="checkbox"/> industry	<input type="checkbox"/> politics/government	<input type="checkbox"/> transportation
		<input checked="" type="checkbox"/> invention		<input type="checkbox"/> other (specify)

Specific dates 1925 **Builder/Architect** Kell-Atkinson Construction

Statement of Significance (in one paragraph)

Criteria C

The Ashtabula West Fifth Street Bridge is significant because it is the only single leaf bascule bridge left on the Ohio state highway system. The bridge is significant also in that it is the product of the efforts of two early innovators in the field of bascule bridge development: Thomas E. Brown and his son Thomas Junior.

The Ashtabula bridge is a Mystic type of Brown bascule bridge. This type of bridge was invented by Thomas E. Brown of New York. His importance to the development of bascule bridges is illustrated in the fact that he, along with his son, were responsible for more than twelve patents in this field. Brown developed his first bascule bridge in the 1890's. This bridge was marked by a counterweight that moved vertically. Early in the twentieth century he and his son turned their attentions towards devising a simple and effective way to operate small bascule bridges. Their efforts materialized in the Brown balance-beam or Mystic type bascule bridge. This type of bridge was first built in 1922 in Mystic, Connecticut. This innovation featured overhead counterweights connected to trusswork balance beams. In practical terms this allowed for a simplified arrangement of the balance beam structure and reduced the steel content and weight of the structure. This, of course, resulted in savings in cost. This design was patented in 1910 and 1924.

Thomas Brown grew up in New York City. He spent the later part of the 1800's working as an engineer on elevated and inclined railroads. He also was chief engineer of the Otis Elevator Company. One of his substantial accomplishments is his design of the original elevator in the Eiffel Tower in Paris, France.

Wendell P. Brown designed the specific bascule bridge found in Ashtabula. Thomas Brown died before the Ashtabula bridge was built. This bridge differs from its counterpart in Mystic in the fact that it is slightly more sophisticated in the trusswork of the balance beams and the main span is a truss in place of the earlier plate girder.

The historic engineering importance of the Ashtabula bascule bridge at the state level is documented. Aside from this distinction it is of local importance due to its location at the east end of the Ashtabula Harbour Historic District. The eastern span of the bridge is bounded on the north by Maxwell Industries Inc. and on the south by land owned by Lawler, Inc. The bridge has played an important role in the historical nature of the lakefront area. The bridge was declared eligible for the National Register on December 15, 1976 and has been the focus of a local preservation effort.

9. Major Bibliographical References

Ashtabula Star Beacon

The Ohio Historic Bridge Inventory Evaluation and Preservation Plan, published by the Ohio Department of Transportation, 1983.

David Simmons, "Unusual Bascule Bridge in Ashtabula." Ohio County Engineer 41 (Nov. 1981):1.

10. Geographical Data

Acree of nominated property less than one

Quadrangle name Ashtabula North

Quadrangle scale 1:24000

UTM References

A

1	7	5	1	6	7	6	0	4	6	3	8	5	2	0
Zone		Easting				Northing								

B

Zone		Easting				Northing								

C

Zone		Easting				Northing								

D

Zone		Easting				Northing								

E

Zone		Easting				Northing								

F

Zone		Easting				Northing								

G

Zone		Easting				Northing								

H

Zone		Easting				Northing								

Verbal boundary description and justification

The nominated property consists of the bridge measuring 235 feet by 30 feet and its piers and abutments.

List all states and counties for properties overlapping state or county boundaries

state N/A code county code

state code county code

11. Form Prepared By

name/title Warren Slay

organization date 04/12/85

street & number 3102 Jefferson Road telephone 216/993-7205

city or town Ashtabula state Ohio

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

national state local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature Richard Francaviglia for W. Ray Luce

title State Historic Preservation officer date 7/12/85

For NPS use only

I hereby certify that this property is included in the National Register

for Joseph M. Simmons
Keeper of the National Register

Entered in the
National Register

date 8/23/85

Attest:

Chief of Registration

date

*Rec'd
25001801 +*

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

West Fifth Street Bridge
Ashtabula County
OHIO

Working No. JUL 23 1985
Fed. Reg. Date: 2-4-86
Date Due: 8/22/85 - 9/6/85
Action: ACCEPT 8/23/85
 RETURN
 REJECT
Federal Agency: _____

Entered in the
National Register

- resubmission
- nomination by person or local government
- owner objection
- appeal

Substantive Review: sample request appeal NR decision

Reviewer's comments:

Recom./Criteria _____
Reviewer _____
Discipline _____
Date _____
_____ see continuation sheet

Nomination returned for: _____ technical corrections cited below
_____ substantive reasons discussed below

1. Name

2. Location

3. Classification

Category	Ownership Public Acquisition	Status Accessible	Present Use
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4. Owner of Property

5. Location of Legal Description

6. Representation in Existing Surveys

Has this property been determined eligible? yes no

7. Description

Condition	Check one	Check one
<input type="checkbox"/> excellent	<input type="checkbox"/> deteriorated	<input type="checkbox"/> original site
<input type="checkbox"/> good	<input type="checkbox"/> ruins	<input type="checkbox"/> moved date _____
<input type="checkbox"/> fair	<input type="checkbox"/> unexposed	
	<input type="checkbox"/> unaltered	
	<input type="checkbox"/> altered	

Describe the present and original (if known) physical appearance

- summary paragraph
- completeness
- clarity
- alterations/integrity
- dates
- boundary selection

8. Significance

Period _____ Areas of Significance—Check and justify below

Historic dates _____

Builder/Architect _____

Statement of Significance (*in one paragraph*)

- summary paragraph
- completeness
- clarity
- applicable criteria
- justification of areas checked
- relating significance to the resource
- context
- relationship of integrity to significance
- justification of exception
- other

9. Major Bibliographical References

10. Geographical Data

Acreage of nominated property _____

Quadrangle name _____

UTM References _____

Verbal boundary description and justification

11. Form Prepared By

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

____ national ____ state ____ local

____ Historic Preservation Officer signature

title _____

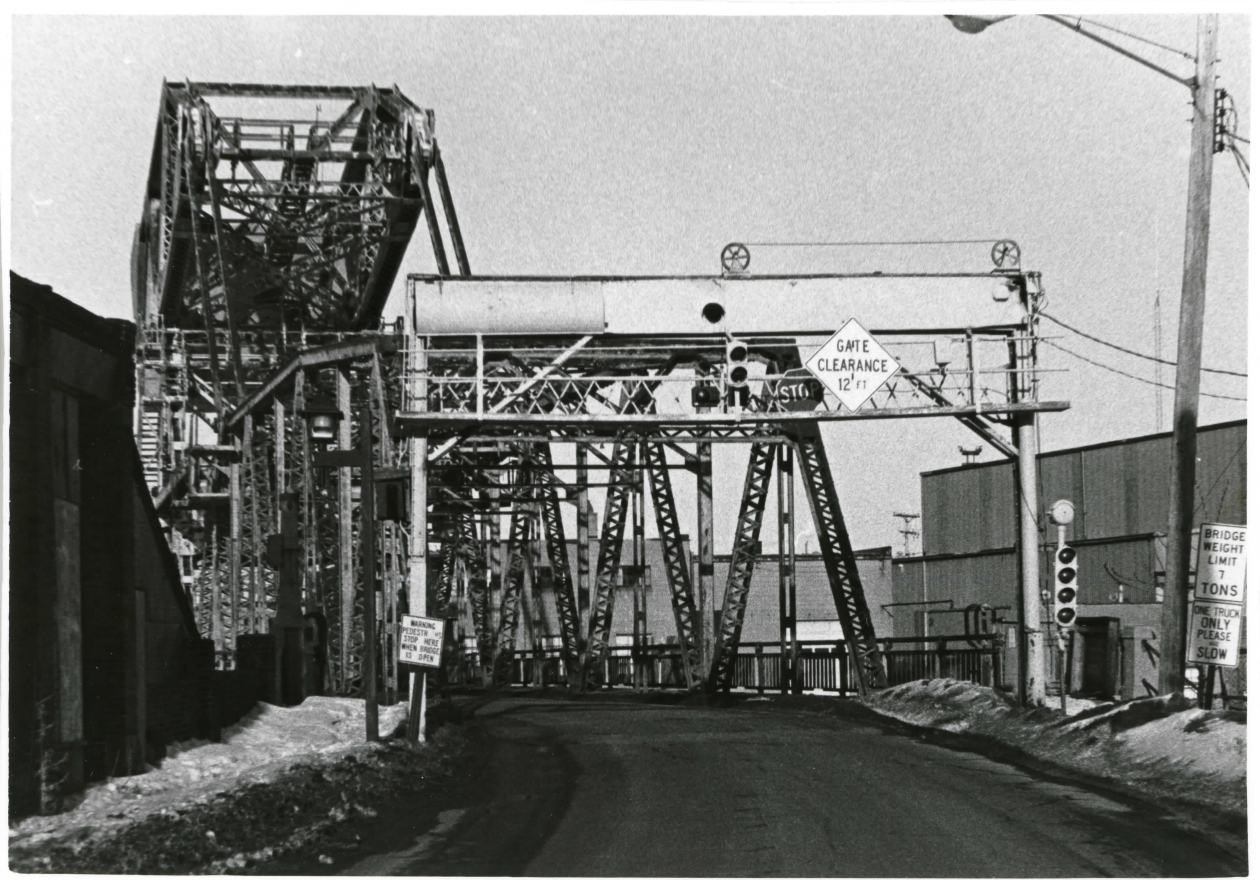
date _____

13. Other

- Maps
- Photographs
- Other

Questions concerning this nomination may be directed to _____

Signed _____ Date _____ Phone: _____



GATE
CLEARANCE
12' ft

WARNING
PEDESTALS -
STOP HERE
WHEN BRIDGE
IS DOWN

BRIDGE
WEIGHT
LIMIT
7
TONS
ONE TRUCK
ONLY
PLEASE
SLOW

West Fifth Street Bridge
Bridge Street, Ashtabula, Ashtabula county,
Ohio

Photographer: Raymond J. Billy, February, 1985.

Negative on file at anthropology dept.,
Youngstown State University
East portion looking West, 1 of 4 photos



GATE
CLEARANCE
12 FT

WARNING
PEDESTRIANS
STOP HERE
WHEN BRIDGE
IS OPEN

POUCH

West Fifth Street Bridge
Bridge Street, Ashtabula, Ashtabula county,
Ohio

Photographer: Raymond J. Billy, February,
1985.

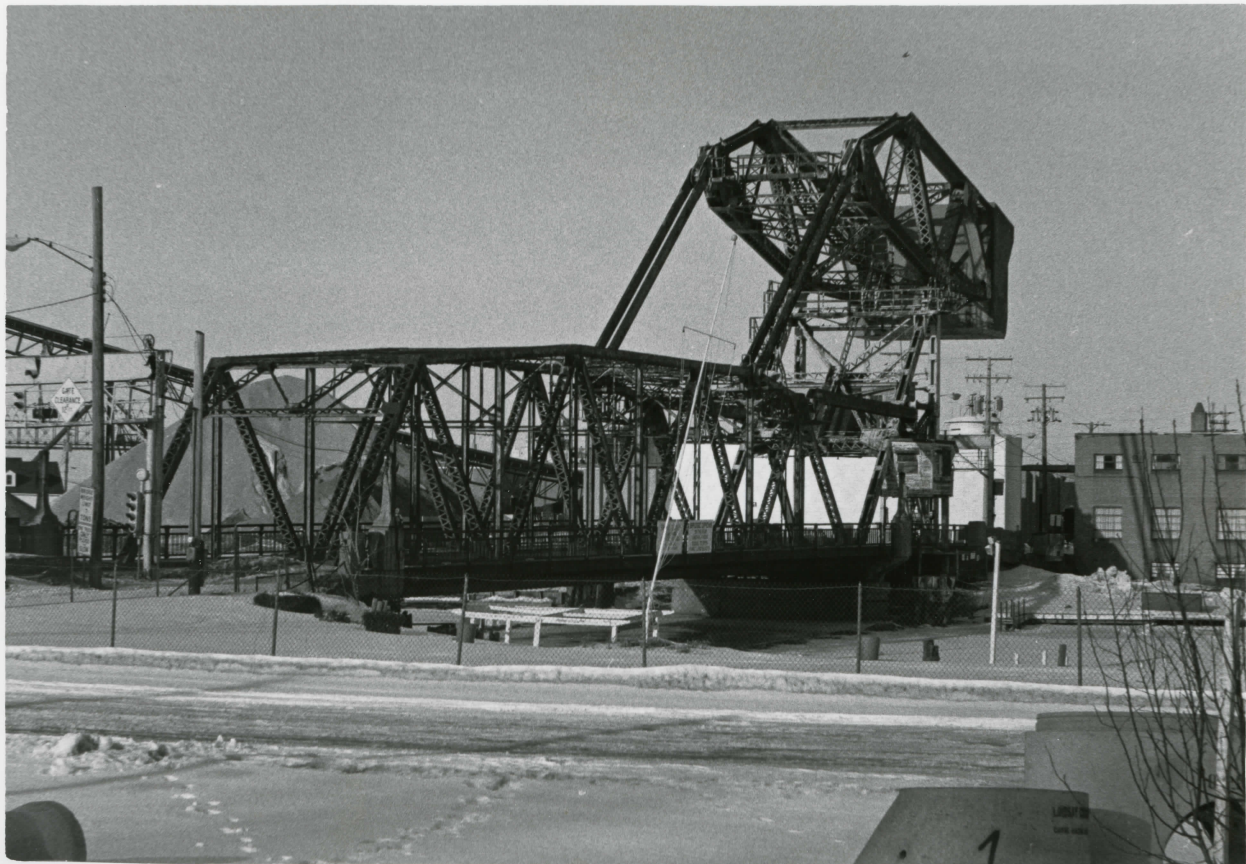
Negative on file at anthropology dept.,
Youngstown State University
Close up looking West, 2 of 4 photos



West Fifth Street Bridge
Bridge Street, Ashtabula, Ashtabula county,
Ohio

Photographer: Raymond J. Billy, February,
1985.

Negative on file at Anthropology Dept.,
Youngstown State University
Looking South, 3 of 4 photos

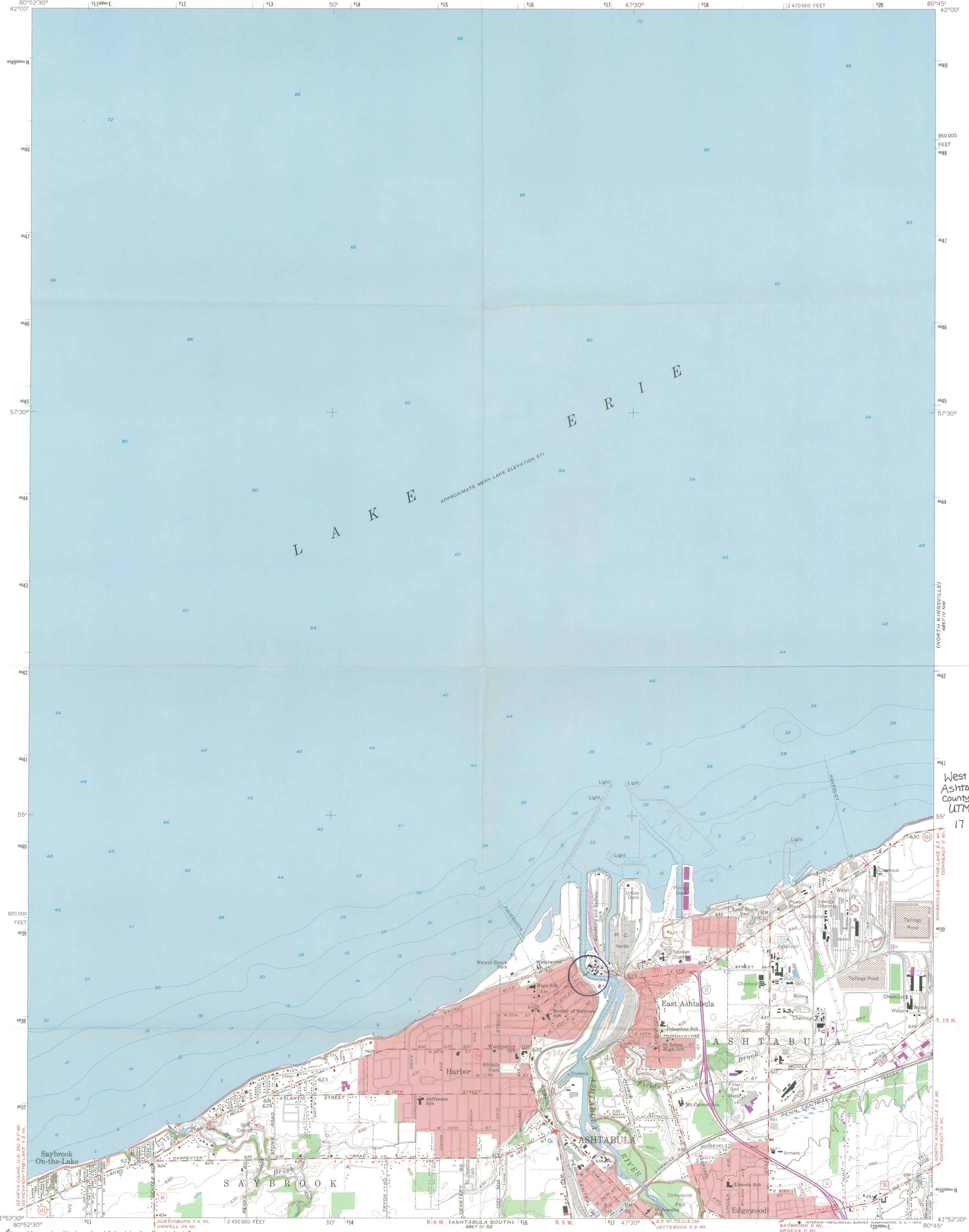


West Fifth Street Bridge
Bridge Street, Ashtabula, Ashtabula county,
Ohio

Photographer: Raymond J. Billy, February,
1985.

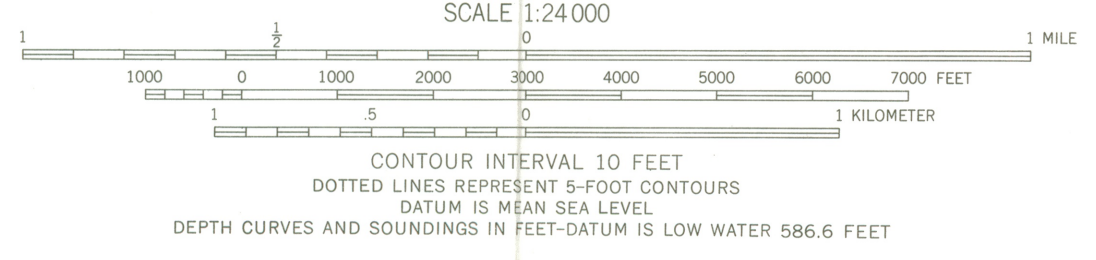
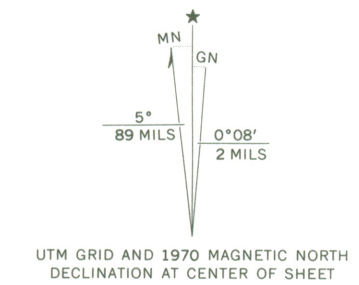
Negative on file at anthropology dept.,
Youngstown State University
Looking Northeast, 4 of 4 photos

West Fifth Street Bridge
Ashtabula County, Ohio
UTM Coordinates: 516760/4638520



West Fifth St. Bridge
Ashtabula, Ashtabula
County, Ohio
UTM:
17 516760 4638520

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography from aerial photographs by photogrammetric methods
Aerial photographs taken 1958. Field check 1960
Selected hydrographic data compiled from U.S. Lake Survey charts
34 (1958) and 342 (1959). This information is not intended for
navigational purposes
Polyconic projection. 1927 North American datum
10,000-foot grid based on Ohio coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks,
zone 17, shown in blue
Fine red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is unchecked
Red tint indicates areas in which only landmark buildings are shown
Entire area lies within Connecticut Western Reserve



ROAD CLASSIFICATION
Medium-duty ——— Light-duty ———
Unimproved dirt ———
U.S. Route ——— State Route ———
Heavy-duty ———
ASHTABULA NORTH, OHIO
NE/4 ASHTABULA 15' QUADRANGLE
N4152.5-W8045/7.5
1960
PHOTOREVISED 1970
AMS 4867 IV NE-SERIES V852

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled in cooperation with
State of Ohio agencies from aerial photographs taken 1970
This information not field checked

Ohio Historic Preservation Office

1985 Velma Avenue
Columbus, Ohio 43211
614/466-1500



OHIO
HISTORICAL
SOCIETY
SINCE 1885

July 16, 1985

Ms. Carol Shull, Chief
National Register of Historic Places
National Park Service
Department of the Interior
1100 L Street, N.W.
Washington, D.C. 20240

Dear Carol:

Enclosed are nine new National Register nominations. All of the appropriate notification procedures have been followed for these new submissions. Please note that letters have been received from the First United Methodist Church and the Mayor of Massillon waiving their right to comment on the nomination for the First Methodist Episcopal Church, Massillon, Stark County. Please do everything possible to expedite this nomination.

New Submissions

West Fifth Street Bridge
First Presbyterian Church
of Wapakoneta
National Road
Wheeling Avenue Historic District
Watt-Groce-Fickardt House
Acton House
Middle Bass Club Historic District
First Methodist Episcopal Church
Trinity Lutheran Church

County

Ashtabula

Auglaize
Guernsey
Guernsey
Pickaway
Preble
Ottawa
Stark
Stark

Please contact me if you have any questions.

Sincerely,

W. Ray Luce
State Historic Preservation Office

WRL:bp
Enclosures

Recd 7/23/85