

TD
195
.B74
M57
1981b

APR 8 1986

FINAL
4(f) STATEMENT

MISSISSIPPI RIVER BRIDGE

Keokuk, Iowa - Hamilton, Illinois Area

U.S. Department of Transportation
Federal Highway Administration

Iowa Department of Transportation
Planning and Research Division

Iowa Project No. BRF-19-1 (2)

May, 1981

STATE LIBRARY OF IOWA
Historical Building
DES MOINES, IOWA 50319

FINAL
4(f) STATEMENT

MISSISSIPPI RIVER BRIDGE

Keokuk, Iowa - Hamilton, Illinois Area

U.S. Department of Transportation
Federal Highway Administration

Iowa Department of Transportation
Planning and Research Division

Iowa Project No. BRF-19-1 (2)

May, 1981



TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
1	Introduction	1
2	The Proposed Action	3
3	Description of 4(f) Properties	9
4	Impacts on 4(f) Properties	14
5	Measures to Minimize Harm	17
6	Alternates to the Proposed Action and 4(f) Implications	21
7	Determination of Eligibility Notification	26
8	Statement of Effect	26
9	Conclusions	26
10	Letters of Comment and Responses	31

LIST OF EXHIBITS

<u>Exhibit Number</u>		<u>Page</u>
1	Plan and Profile - Alternate 3 (Recommended)	7
2	Victory Park	11
3	Keokuk Municipal Bridge	12
4	Project Impacts upon Victory Park	15
5	Mitigation Measures for Victory Park	19
6	Alternate Bridge Alignments	22
7	Determination of Eligibility Notification for the Keokuk Municipal Bridge	28
8	Determination of Eligibility Notification for the Thomas Lester House	29
9	Statement of Effect for the Keokuk Municipal Bridge, Iowa and Illinois State Historic Preservation Officers	30

APPENDIX

Exhibit

- A Correspondence - City of Keokuk to the Iowa Department of Transportation, dated October 17, 1980
- B Correspondence - Iowa Department of Transportation to the City of Keokuk, dated December 9, 1980 (2 pages)
-
- C Correspondence - City of Keokuk to the Iowa Department of Transportation, dated January 16, 1981
- D Correspondence - U.S. Department of Interior, Fish and Wildlife Service to the U.S. Department of Transportation, Federal Highway Administration, dated November 7, 1979 (2 pages)
- E Correspondence - Illinois Endangered Species Protection Board to the Illinois Department of Transportation, dated July 15, 1980 (4 pages)
- F Correspondence - Illinois Department of Transportation to the Iowa Department of Transportation, dated October 7, 1980 (5 pages)
- G Correspondence - U.S. Department of the Army, Corps of Engineers to Howard Needles Tammen & Bergendoff, dated April 28, 1980 (2 pages)

1. INTRODUCTION

1.1 APPLICABLE LAWS

Section 4(f) of the Department of Transportation Act of 1966 specifies that the proposed use of certain environmentally significant lands--commonly referred to as 4(f) lands--for any transportation facility must undergo a thorough review before being considered for approval. The policy and requirements set forth in Section 4(f) are as follows:

It is hereby declared to be the national policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretary of the Interior, Housing, and Urban Development, and Agriculture, and with the states in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed...the Secretary (of Transportation) shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance as determined by the Federal, state, or local officials having jurisdiction thereof, or any land from a historic site of national, state, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreation area, wildlife refuge, or historic site resulting from such use.

Covered by Section 4(f) are those properties subject to Section 106 of the National Preservation Act. Under Section 106, any Federal Agency affecting a property included in or eligible for the National Register of Historic Places must follow "Procedures for the Protection of Historic Properties." These procedures require a rigorous program of review and comment by the Advisory Council on Historic Preservation.

As noted above, the considerations of the 4(f) statement include those lands used as parks and recreation areas, in this case Victory Park.

Section 4(f) requires that all possible planning be utilized to minimize harm to the affected properties. A discussion of measures to minimize harm is contained in Chapter 5.

Section 4(f) also directs that approval of any transportation facility which affects environmentally significant lands be based on a determination that there is no "prudent and feasible" alternative to the proposed action. Chapter 6 of this report discusses the various alternates to the proposed action which were considered and the reasons why they fail to completely satisfy cross-river traffic demands and other project objectives.

In order to provide complete information, Chapter 7 of this report contains the official determination of eligibility notifications from the Department of the Interior on Historic Properties along the bridge routes. Chapter 8 contains the Statements of Effect on National Register eligible properties as determined by the Federal Highway Administration in conjunction with the Iowa and Illinois State Historic Preservation Officers.

2. THE PROPOSED ACTION

2.1 INTRODUCTION

Keokuk, Iowa is located on the west bank of the Mississippi River in the extreme southeastern corner of the state. Hamilton, Illinois is directly across the river from Keokuk. U.S. Highway 136 connects the two cities, traveling over the Keokuk Municipal Bridge.

The proposed action is to construct a new four-lane, high-level, highway bridge and approaches in the vicinity and to close the existing bridge for highway use. The lower deck will continue to be used by the Toledo, Peoria and Western Railroad.

2.2. STATEMENT OF NEED

The present bridge roadway is only 17 feet 3 inches wide, curb to curb. This is far short of modern design standards and is dangerously narrow, especially when truck traffic uses the bridge. Construction of a new, high-level bridge has been a long standing goal of the local communities and of the State Departments of Transportation. A new bridge would improve traffic service, increase safety, and eliminate delays caused by frequent openings of the present bridge to river traffic.

2.3 RECOMMENDED ALTERNATE

A series of technical evaluations was made of eight alternative river crossing corridors in the study area and of a No Build option, refer to subsequent Exhibits 1 and 6. These alternatives were studied with respect to potential environmental impacts, social impacts, citizen preference, economic considerations, traffic service, construction costs, and anticipated right-of-way requirements. Special study was given to the very significant eagle sanctuary along the east bank of the river. Additional biological impact studies were also made for other affected and endangered species in the project area.

These detailed environmental, economic, and engineering evaluations indicated that Alternates 2, 3, and 7 were the most feasible and should be developed in greater depth. This was subsequently done in the form of scale drawings and profile grade studies. Because of serious environmental and economic deficiencies, Alternates 1, 4, 5, 6, 8, and the No Build option were dropped from further consideration, refer to Section 6 for additional data.

Additional analyses indicated that despite certain desirable or potential traffic service features, some of which would require substantial additional construction, Alternate 7 had serious environmental and economic weaknesses. They included:

- a relatively large number of residential and commercial displacements
- substantially higher construction costs
- increased user costs
- a potentially adverse impact upon the downtown area

It was concluded that while Alternate 7 could be considered a viable alternate, it is not a cost-effective solution to the current congestion problems on the Keokuk Municipal Bridge.

Alternates 2 and 3 emerged from the study as the preferred alternates and were presented as such at the project public hearing in Keokuk on August 7, 1979. In general, they have similar characteristics. There are no significant differences between the two in traffic service, adverse travel distances, air quality impacts or traffic-related impacts upon downtown Keokuk. The primary differences are in the type and degree of environmental impact upon adjacent properties and in estimated construction costs.

The subsequent selection of Alternate 3 as the recommended route was primarily based on the following evaluation factors:

- The Illinois Endangered Species Protection Board and the Illinois Department of Conservation endorsed Alternate 3 because of reduced environmental impacts upon the existing eagle sanctuary. Refer to Appendix Exhibits D, E, and F.
- Alternate 2 would displace the historic Thomas Lester House in Keokuk. This building has been determined to be eligible for the National Register of Historic Places. Alternate 3 does not displace any buildings. Refer to Report Exhibit 8.
- Alternate 2 would cross over and require a portion of the Montebello Access Area in Illinois, a recreational area administered by the Illinois Department of Conservation.
- Alternate 2 would cross directly over the lower approach channel to the Corps of Engineers Lock 19. The Corps is concerned about potential hazards to the lock during construction and the possible long-term effects of this bridge location upon lock security and worker safety. The Corps has stated that Alternate 2 is unacceptable to them. Refer to Appendix Exhibit G.
- Alternate 3 received the greatest number of positive votes from mail-in questionnaire surveys following the two public information meetings and in a readership poll conducted by the Keokuk Daily Gate City newspaper.
- The estimated cost of Alternate 3 is approximately \$4 million less than for Alternate 2, based upon current unit prices.

In view of the above significant factors, Alternate 3 has been determined by the City of Keokuk, the Iowa and Illinois Departments of

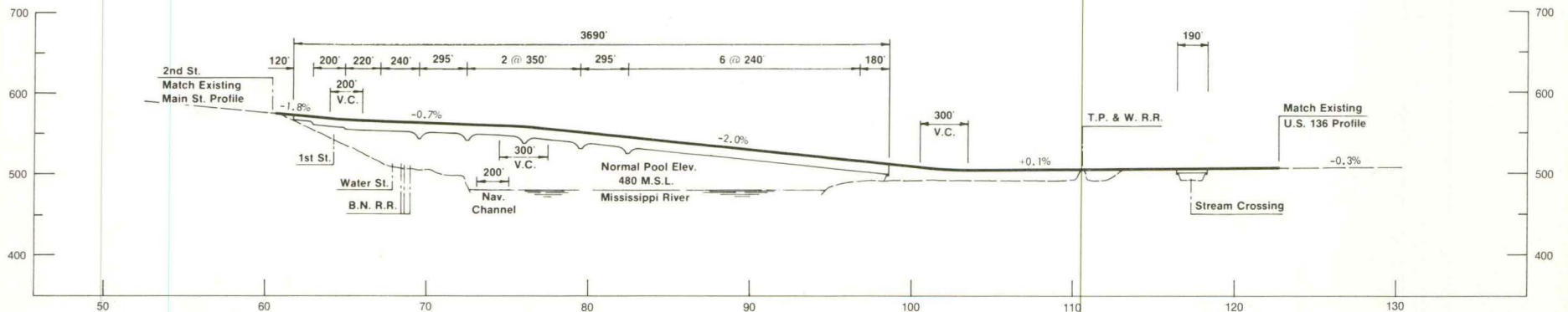
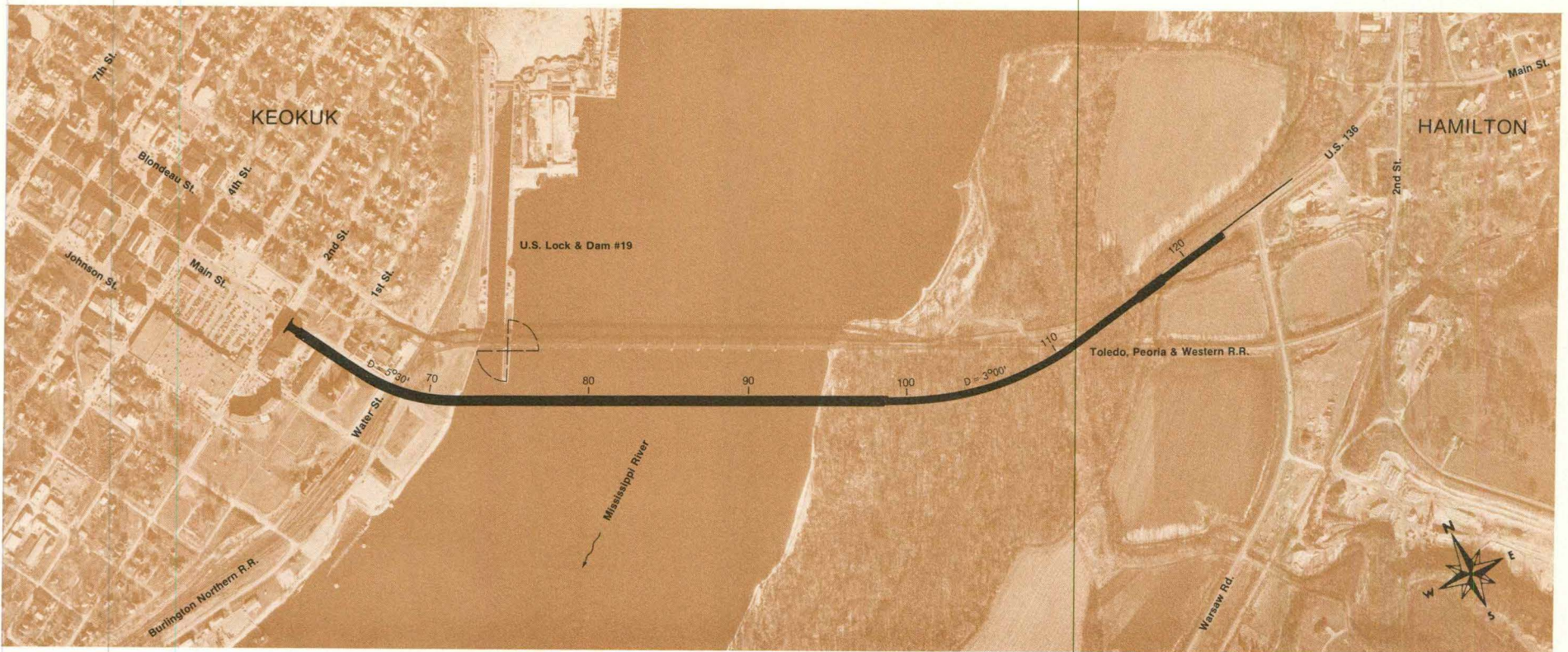
Transportation, the Federal Highway Administration, and the other commenting agencies to be the only acceptable location for the replacement bridge.

2.4. RECOMMENDED ALIGNMENT

The Recommended Alignment (Alternate 3) extends eastward on a tangent alignment from the intersection of Second and Main Streets in Keokuk, refer to Exhibit 1. The alignment then curves to the left on a $5^{\circ}30'$ curve from a point about 200 feet north of Water Street to a point near the Iowa shoreline. Nearly all of the Iowa approach would be elevated on structure and would cross over First Street, Main Street below First Street, Water Street, and the Burlington Northern Railroad. The alignment would be located parallel to and approximately 300 feet downstream from the existing Keokuk Bridge from a point near the Iowa shoreline to a point approximately 500 feet beyond the Illinois shoreline.

The main span of the new bridge would cross over the existing navigation channel immediately downstream from the Lock 19 approach channel. Sufficient lateral clearance would be provided for the horizontal swing span on the Keokuk Municipal Bridge to clear the new bridge.

The Illinois approach would curve to the left from a point near the end of the river bridge to a point near a grade crossing of the Toledo, Peoria and Western Railroad. The approach alignment would then follow a tangent course and intersect the existing alignment of U.S. 136 about 1,000 feet west of Warsaw Road. The widening and improvement of the existing roadway would be extended to include reconstruction of the Warsaw Road intersection. Also included would be the widening of a major drainage structure over Hamilton Slough. Except for a possible local road connection into the Montebello Access Area, no grade intersections or ramp connections would occur between the project termini. The overall length of



**PLAN AND PROFILE
ALTERNATE 3 (RECOMMENDED)**

**ENVIRONMENTAL AND BRIDGE LOCATION STUDY
KEOKUK IOWA — HAMILTON, ILLINOIS AREA
HOWARD NEEDLES TAMMEN & BERGENDOFF**

EXHIBIT 1



the Recommended Alignment is approximately 1.3 miles. The total estimated project cost is \$24,030,000.

No developed property would be required by this alternate.

3. DESCRIPTION OF 4(f) PROPERTIES

3.1. VICTORY PARK

Victory Park is a five acre neighborhood park located at the foot of Main Street along the Mississippi River. Victory Park is the only park in the Keokuk Municipal Park system that is located near the same level as the river. Existing facilities include a picnic area, parking lot, playground equipment, riverwalk, overlook, and a sitting area. There are no visitor use figures available but the area is classed as a passive, low intensity use area. ~~The major recreation activities are picnicking and fishing from the shore area.~~ Victory Park is one of eight neighborhood parks in Keokuk and also one of several located near the river. The area is enhanced by its proximity to the old railroad station, the Verity Riverboat Museum, Lock and Dam No. 19, and Westminster United Presbyterian Church.

The park site is primarily flat and open. The northern portion of the site has several large maple trees which shade the playground area. There is a considerable amount of parking between the remaining portion of the park and the Verity Riverboat Museum. Complementing the riverboat museum are several historic monuments which include the arches from the old Verandah Building, a statue of General Curtis, and a cannon. The Verity Riverboat Museum is a city-owned riverboat drydocked at the southwestern corner of the park and open to the public from April to October.

The park is bounded on the north by Water Street and a railroad switching yard which can be a disruptive influence on the park users' recreational experience. The adjacent municipal water treatment plant has a negative visual impact on the park.

~~Additional park activities, which are of regional importance, are the annual street fair held in the summer and the biennial visit of Counter~~

Point II. College age musicians give classical music concerts on the Counter Point II and throughout the city during their two week stay, refer to Exhibit 2.

3.2. KEOKUK MUNICIPAL BRIDGE

The Keokuk Municipal Bridge connects Keokuk, Iowa, and Hamilton, Illinois via U.S. Highway 136 and is also known as the Keokuk and Hamilton Bridge. The bridge and its approach roadways are owned by the City of Keokuk, refer to Exhibit 3.

The following description and statement of significance was a part of the request for determination of eligibility.

Description

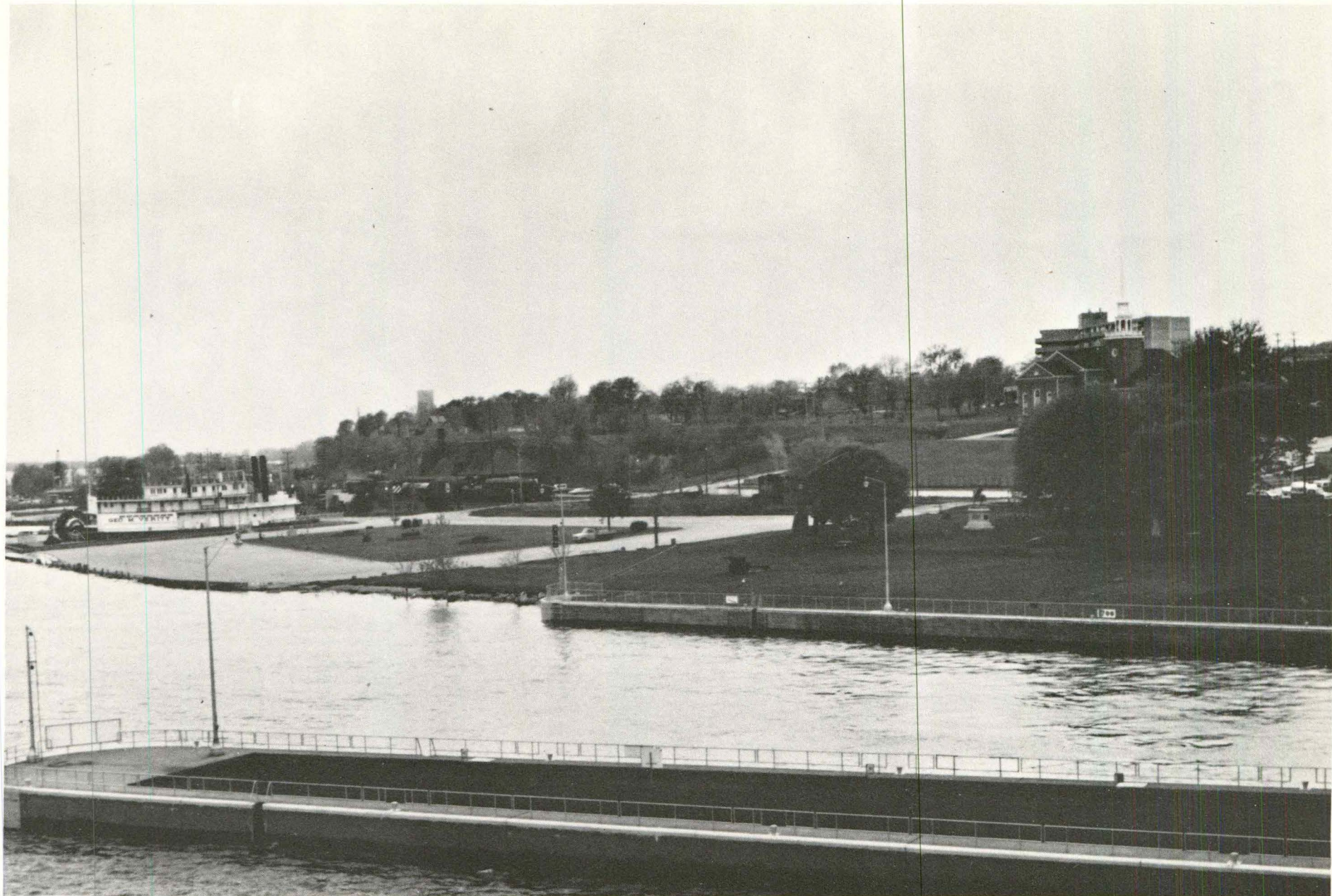
The Keokuk Municipal Bridge is a 3,500-foot, 13 span, high truss bridge, which includes a 383-foot swing span along the Iowa side of the river. As originally built in 1914-1915, the bridge carried a single track railroad through the truss and had a wooden cartway across the top of the truss spans. The cartway was constructed of untreated Douglas fir planking with wooden paving blocks. The bridge also originally included 4'6" wide wooden walkways. The bridge's substructure consists of stone piers which date from the time of the original Keokuk and Hamilton Bridge constructed in 1871.

Since its opening on August 19, 1916, the bridge has twice undergone extensive renovation. The first renovation occurred in 1942, a year after the structure was purchased from the Keokuk and Hamilton Bridge Company by the City of Keokuk. Then again during the period 1955 to 1957, a new open grid highway deck was added.

The 1914 design for the Keokuk and Hamilton Bridge was prepared by Ralph Modjeski, the founder of Modjeski and Masters. Modjeski and Masters has been responsible for subsequent modifications and renovations of the structure, and apparently the firm possesses micro-film records of all plans pertaining to the structure.

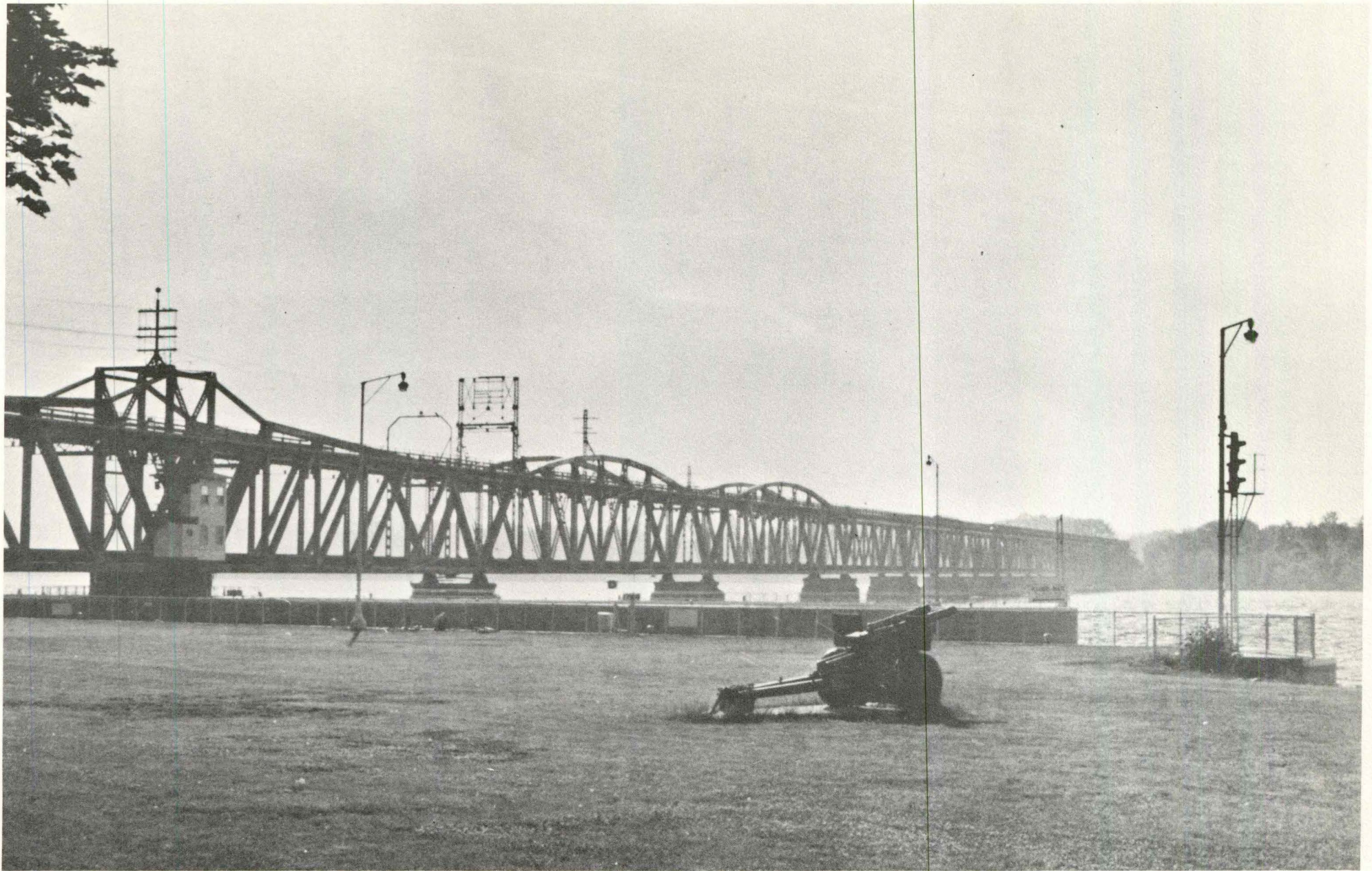
Significance

The significance of the Keokuk Municipal Bridge is twofold. First, the structure possesses local historical significances owing to the fact that it incorporates many elements of the original 1871 bridge, which was one of the earliest bridges constructed on the Mississippi River. Furthermore, the bridge has figured prominently in the economic development of Keokuk and its unique design has instilled it with a landmark status for the people of the area.



VICTORY PARK

**ENVIRONMENTAL AND BRIDGE LOCATION STUDY
KEOKUK IOWA — HAMILTON, ILLINOIS AREA
HOWARD NEEDLES TAMMEN & BERGENDOFF**



KEOKUK MUNICIPAL BRIDGE

ENVIRONMENTAL AND BRIDGE LOCATION STUDY
KEOKUK IOWA — HAMILTON, ILLINOIS AREA
HOWARD NEEDLES TAMMEN & BERGENDOFF

The second aspect of the bridge's significance is due to its association with Ralph Modjeski, who, as the attached biographical information indicates, was one of this country's foremost bridge designers of the early twentieth century. In addition to the Keokuk Municipal Bridge, which he designed in 1914 for Andrew Carnegie's Keokuk and Hamilton Bridge Company, Modjeski designed such other Mississippi River bridges as the Northern Pacific Railroad Bridge at Rock Island, Illinois (1894); the Southern Illinois and Missouri Bridge Company bridge at Thebes, Illinois (1902); the McKinley Bridge at St. Louis (1907); and the Harahan Bridge at Memphis, Tennessee (1914). Ralph Modjeski also designed bridges in New York, Ohio, Pennsylvania, Texas, Michigan, Louisiana, and elsewhere.

For his outstanding work Ralph Modjeski has been widely recognized, and among his many professional awards are the Howard N. Potts Gold Medal in 1914, the Franklin Medals in 1922, the John Scott Medal in 1924, and the John Fritz Medallion 1930. Furthermore, he was awarded the Grand Prize by the Polish Government at the Exposition of Industry and Science at Posen, Poland, and he was also selected as a representative of the United States at the World Engineering Congress in Japan.

It was subsequently determined that the Keokuk Municipal Bridge was eligible for inclusion in the National Register, refer to subsequent Exhibit 7. The State Historic Preservation Officers of both Iowa and Illinois have since ruled that the project will have no effect upon the existing bridge, refer to subsequent Exhibit 9.

4. IMPACTS ON 4(f) PROPERTIES

4.1. VICTORY PARK

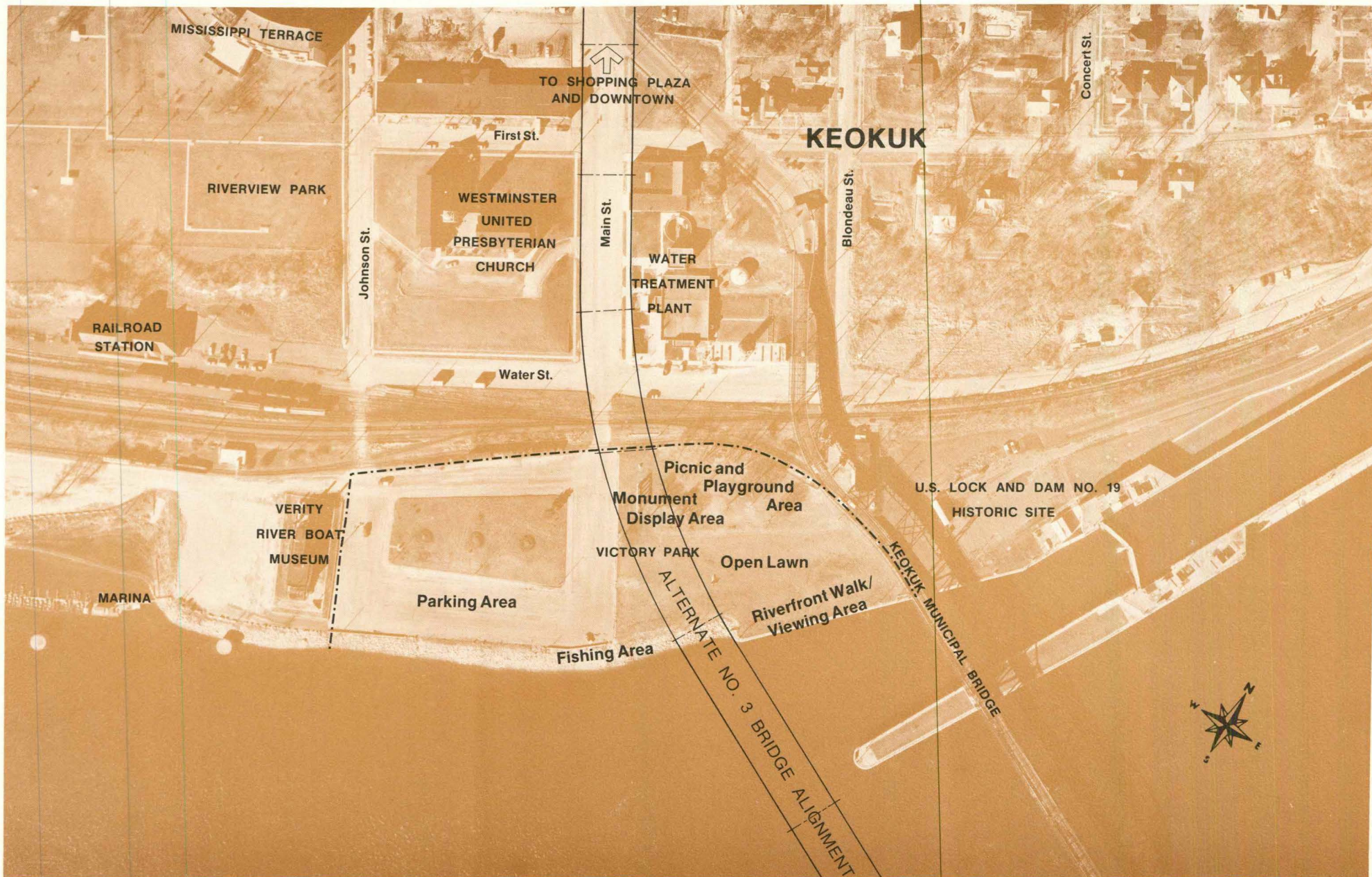
The Recommended Alignment passes over Victory Park on structure at an elevation ranging from 58 to 64 feet above the park. Commencing at Main Street, the bridge passes over the parking lot and then curves out over the grassed area, refer to Exhibit 4. The park could be spanned by locating one pier near the railroad tracks and the other near the river. Pier locations would be the only place where land is taken by this bridge proposal. The signal lights for river traffic approaching the locks, the Versailles arches, and a civil war marker will have to be moved and two trees will be taken by pier construction.

The bridge location has some major visual impacts upon the present park character. The park is an open, sunny site with unique views of the area. The bridge will cast an afternoon shadow on the open area which may or may not be objectionable. It may also tend to visually constrict the park between the old and new bridges. In spite of the height of the bridge, it may somewhat separate the present connection between the Verity Riverboat area and main portion of Victory Park itself.

The air quality and noise analysis found that conditions would not worsen because of the proposed action. The design and height of the new bridge approaches tend to abate the adverse effects of increased traffic volumes.

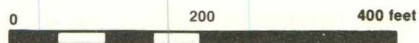
Short-term impacts due to construction are also a consideration. These include: increased air and noise pollution, construction activities, and visual distractions from equipment, materials, storage, etc.

The proposed bridge will also have some positive impacts upon Victory Park: The visual contrast between the new and old bridges would be



PROJECT IMPACTS UPON VICTORY PARK

ENVIRONMENTAL AND BRIDGE LOCATION STUDY
 KEOKUK IOWA — HAMILTON, ILLINOIS AREA
 HOWARD NEEDLES TAMMEN & BERGENDOFF



interesting and the park site would permit a close-up view of both bridges. Additional parking could also be provided on Main Street beneath the bridge; this would, in turn, allow some of the existing parking lot in the park to be utilized for other recreational purposes or as open space.

4.2. KEOKUK MUNICIPAL BRIDGE

Implementation of the Recommended Alignment calls for closing the existing bridge to highway traffic. The removal of the highway deck from the Keokuk Municipal Bridge approaches may be done at the discretion of the city. When the new bridge is constructed, the existing bridge can be left in the open position, thus greatly facilitating the movement of river traffic. The bridge would close only for train movements.

The Statement of Finding executed between the FHWA and the Iowa and Illinois State Historic Preservation Officers (Exhibit 9) documents that construction of the new bridge on the Recommended Alignment will have no effect on the existing structure.

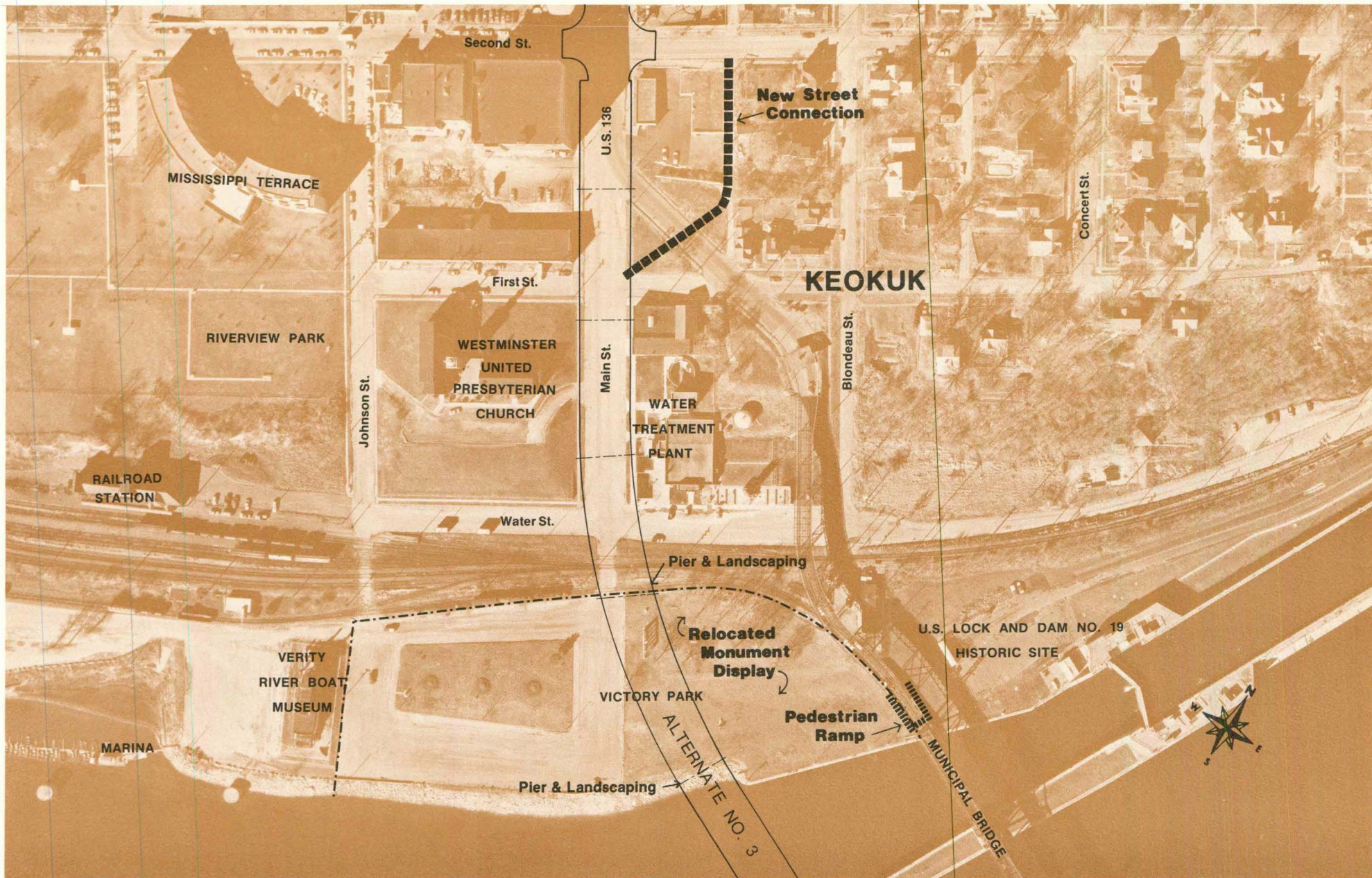
5. MEASURES TO MINIMIZE HARM

5.1 VICTORY PARK

Aside from the land taken for the bridge piers, the bridge itself will be located from 58 to 64 feet above the park. Preliminary studies indicated that a reorganization of the park area, along with other related improvements, would be very beneficial. Refer to Exhibit 5.

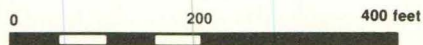
The Iowa Department of Transportation and the City of Keokuk have developed and agreed upon a list of mitigating measures for Victory Park. See Exhibits A, B and C in the report Appendix for copies of the correspondence between the City and the Department relating to the mitigative measures. The list also has the concurrence of the Federal Highway Administration. Those improvements and modifications to be included with the bridge project include:

- The Veranda Building Archs and the Curtis Statue will be relocated upriver to a site of the City's choice within the park. The relocation will include any incidental regrading of the area that might be required.
- A new at-grade pedestrian ramp will be constructed across the T.P.& W. Railroad tracks so as to connect Victory Park with U. S. Army Corps of Engineers Lock and Dam No. 19 facilities north of the park. This will connect the Corp of Engineers' observation area with the park, a significant betterment.
- Lighting will be installed on the underside of the new bridge approach at its crossing of Victory Park.
- A new street connection will be constructed between First and Second Streets approximately midway between Main and Blondeau Streets, to provide access to the park and to additional on-street parking on Main Street.



MITIGATION MEASURES FOR VICTORY PARK

ENVIRONMENTAL AND BRIDGE LOCATION STUDY
 KEOKUK IOWA — HAMILTON, ILLINOIS AREA
 HOWARD NEEDLES TAMMEN & BERGENDOFF



- Appropriate landscaping will be provided at the pier locations within the park.

It has been suggested that a portion of the upper deck of the existing Keokuk Municipal Bridge approach be maintained as a pedestrian overlook for viewing the locks, river, dam and surrounding area. In this sense, the old bridge has some potential as a recreational resource. However, the future status of the bridge approach is uncertain at this time. If it remains under City ownership, it would have some potential as a riverfront attraction and could perhaps be coordinated with other riverfront attractions in this area.

The State will acquire the necessary right of way for construction of two bridge piers within the limits of Victory Park. It is anticipated that one pier will be located adjacent to the river, the other near the Burlington Northern R.R. tracks. Approximately 8100 square feet (0.19 acre) of right of way would be required for the two piers. The State will acquire this parkland from the City in fee title together with a temporary construction easement along the alignment of the structure. Air rights for the elevated structure will be leased from the City by the State.

Measures will be taken to lessen any adverse impacts on the park from construction of the bridge approach. First, the construction area will be fenced for safety reasons. Steps will also be taken to ensure that the storage of any construction equipment and materials in the area would not prohibit the safe and enjoyable usage of the park. It is also necessary that existing trees be protected during construction.

5.2. KEOKUK MUNICIPAL BRIDGE

As previously noted, the State Historic Preservation Officers of Iowa and Illinois have declared that the proposed action will have no

effect upon the existing Keokuk Municipal Bridge. The only involvement with the bridge would be the removal of some roadway decking on both bridge approaches if the city elects to remove the highway approaches to the railroad abutments.

During construction, barges and construction equipment will be positioned to minimize impacts on the existing piers. New pier locations will probably be aligned with the existing piers for hydraulic and navigational purposes. This arrangement will also be aesthetically superior for elevation views of the bridge.

6. ALTERNATES TO THE PROPOSED ACTION AND 4(f) IMPLICATIONS

6.1. INTRODUCTION

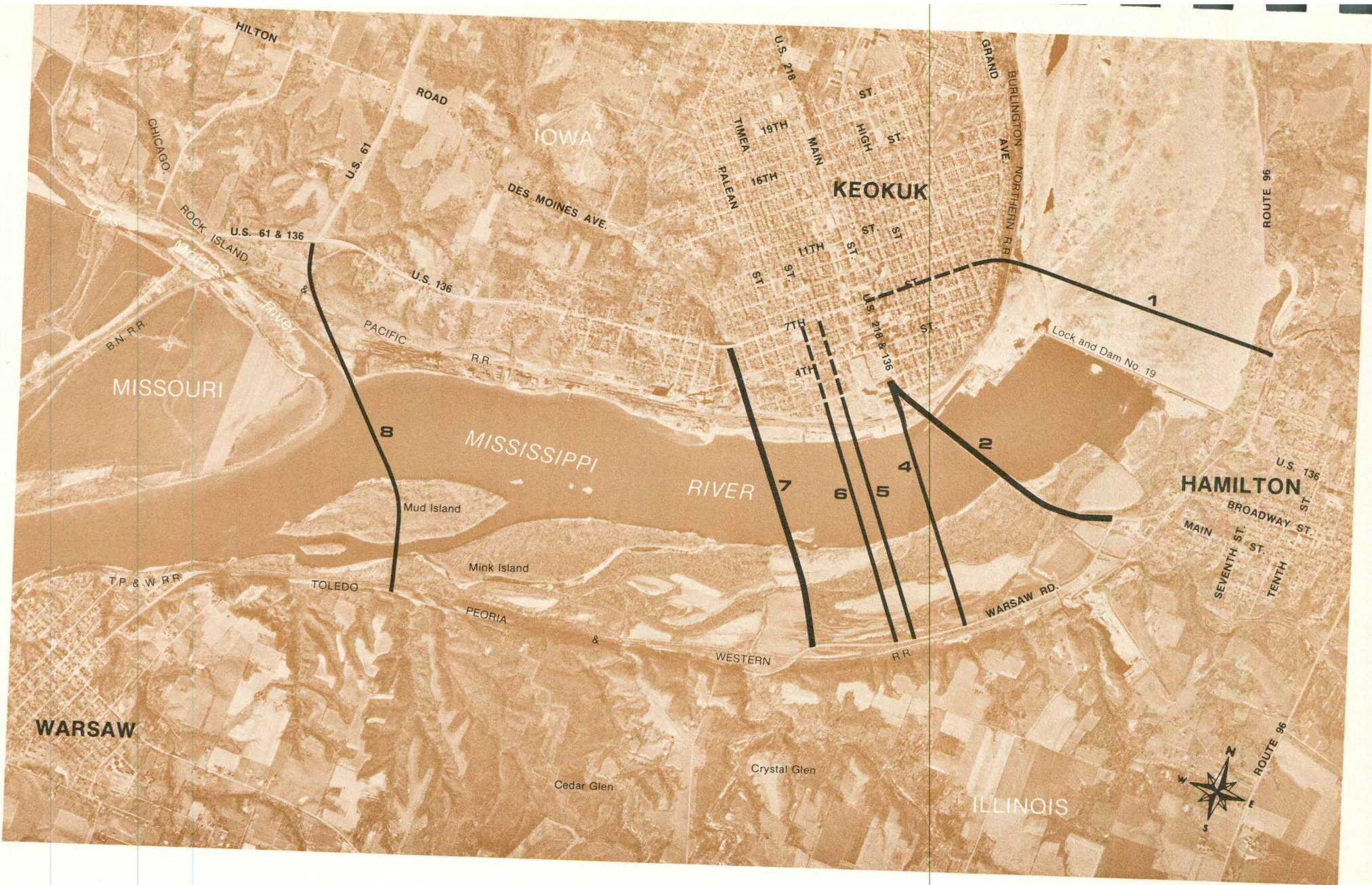
A number of alternative bridge sites were identified and evaluated during the location studies, refer to Exhibit 6. Each of the alternatives identified in the initial stages of study was considered to be technically feasible. However, during subsequent study stages, some of the alternatives were found to have serious environmental, economic, or engineering deficiencies, or lacked public support in the local community. The alternatives which were eliminated from further consideration included: The No-Build option and Alternates 1, 2, 4, 5, 6, 7, and 8. Brief discussions of the various alternatives and their principal deficiencies follow.

6.2. NO-BUILD ALTERNATE

The No-Build alternate is not considered a viable option primarily because it fails to alleviate a severe traffic congestion problem on the Keokuk Municipal Bridge. Unless some improvements are made, transportation delays and accident costs will continue to increase. In the long run, the economies of Keokuk and Hamilton would probably decline because of their inability to compete with other cities in the region.

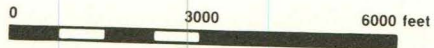
6.3. ALTERNATE 1

Alternate 1 is not considered a viable alternative primarily because of operational deficiencies, severe adverse impacts upon an established residential area in northeast Keokuk, high project costs and substantial public opposition. The lake impounded by Lock and Dam 19 is also a potential 4(f) consideration. Alternate 1 would require approximately 0.7 miles of additional travel for each cross river trip, as compared with a trip via the existing Keokuk Municipal Bridge. This would result in an added user



ALTERNATE BRIDGE ALIGNMENTS

ENVIRONMENTAL AND BRIDGE LOCATION STUDY
 KEOKUK IOWA — HAMILTON, ILLINOIS AREA
 HOWARD NEEDLES TAMMEN & BERGENDOFF



cost of about \$300,000 per year (based upon 1979 operational cost levels).

The total estimated cost of Alternate 1 is \$44,180,000.

6.4. ALTERNATE 2

Alternate 2 impacts Montebello Access Area, an area managed by the Illinois Department of Conservation, and the Thomas Lester House, a building eligible for inclusion on the National Register of Historic Places. Both of these properties are 4(f) properties. The alignment would require one acre of flood plain forest which is used with moderate frequency by eagles for feeding and loafing. This alternate is not acceptable to the Corps of Engineers for safety, operational and maintenance reasons associated with the lock. It also has the potential for major construction problems because of the proximity to the lock and the existing bridge. The total estimated project cost of Alternate 2 is \$28,020,000.

6.5. ALTERNATE 4

Alternate 4 impacts Victory Park and environmentally sensitive wooded lands used by the wintering bald eagles; six acres of flood plain forest would be taken. The alternate would also adversely impact Westminster United Presbyterian Church. In addition, there was a noticeable lack of public support for this bridge site. Alternate 4 would require approximately 0.7 miles of additional travel for each cross river trip, as compared with a trip via the existing Keokuk Municipal Bridge. This would result in added user costs of about \$390,000 per year (based upon 1979 operational cost levels). The total estimated project cost of Alternate 4 is \$27,180,000.

6.6. ALTERNATE 5

Alternate 5 has potential traffic operation and safety problems along Bank Street in Keokuk and related adverse impacts on adjacent

businesses and residences. It would lie adjacent to Riverview Park in Keokuk. There was very little public support for this route. The alignment crosses a wooded portion of the eagle sanctuary which is used for feeding and loafing purposes; however, the area is not heavily used by the eagles. Five acres of flood plain forest will be taken. Alternate 5 would require approximately 1.2 miles of additional travel for each cross river trip, as compared with a trip via the existing Keokuk Municipal Bridge. This would result in added user costs of about \$670,000 per year (based upon 1979 operational cost levels). The total estimated project cost of Alternate 5 is \$29,700,000.

6.7. ALTERNATE 6

Alternate alignment 6 would take three acres of flood plain forest and would cross a portion of the eagle sanctuary. The area is primarily used for feeding and loafing and is not heavily utilized by the eagles. There are potential traffic and safety problems along Timea Street in Keokuk. Little public support was expressed for this route. Alternate 6 would require approximately 1.3 miles of additional travel for each cross river trip, as compared with a trip via the existing Keokuk Municipal Bridge. This would result in added user costs of about \$780,000 per year (based upon 1979 operational cost levels). The total estimated project cost of Alternate 6 is \$29,360,000.

6.8. ALTERNATE 7

Alternate 7 would require one acre of flood plain forest. The alignment has a potential for disturbing a primary eagle loafing area along the Illinois shore of the Mississippi River. There would also be significant social impacts because of extensive residential and commercial

displacements. Alternate 7 would require approximately 1.9 miles of additional travel for each cross river trip, as compared to a trip via the existing Keokuk Municipal Bridge. This would result in added user costs of about \$1,160,000 per year (based upon 1979 operational cost levels). The total estimated project cost of Alternate 7 is \$45,260,000.

6.9 ALTERNATE 8

Alternate 8 would have severe adverse impacts on Mud Island, which is owned by the Nature Conservancy, and upon wildlife field stations operated by Western Illinois University. The alignment passes through a heavily utilized portion of the eagle sanctuary. This area is used for feeding and loafing and some night roosting. Approximately ten acres of flood plain forest would be taken. Little public support was expressed for this bridge site. Alternate 8 would require approximately 5.8 miles of additional travel for each cross river trip, as compared to a trip via the existing Keokuk Municipal Bridge. This would result in added user costs of about \$3,940,000 per year (based upon 1979 operational cost levels). The total estimated project cost of Alternate 8 is \$56,950,000.

7. DETERMINATION OF ELIGIBILITY NOTIFICATION

Determination of Eligibility for the Keokuk Municipal Bridge and the Thomas Lester house were requested from the Keeper of the National Register. The Keeper of the Register notified the state that these properties are eligible for inclusion on the National Register for Historic Places. The notifications of eligibility are shown in Exhibits 7 and 8.

8. STATEMENT OF EFFECT

The Federal Highway Administration, in consultation with the State Historic Preservation Officers of Iowa and Illinois, applied the criteria of effect to the Keokuk Municipal Bridge and the Thomas Lester house and issued the Statement of Effect shown in Exhibit 9.

9. CONCLUSIONS

A review of the various build and no-build alternates indicates that they either: (1) fail to meet the transportation needs of the area; (2) are not economically viable, (3) would seriously impact the natural environment; (4) would have severe adverse impacts upon local residents and businesses; or (5) are less desirable than the proposed action on an overall basis. It was found that only the recommended route (Alternate 3) would serve the projected transportation demands of the Keokuk-Hamilton area in a safe and efficient manner and satisfy other environmental issues.

The various technical and environmental studies indicated that while the recommended alignment would impact Victory Park in Keokuk, there are no feasible and prudent alternatives to this action. A number of mitigating measures have been proposed to minimize harm to the park and additional planning and coordination would also be carried out as the project develops to further minimize harm to the environment. Finally, it should be noted

that the Keokuk City Council feels that the project, with the proposed mitigative measures, will have an overall positive effect on the Victory Park recreational area.

EO. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION
National Register of Historic Places
Heritage Conservation and Recreation Service

Name of property: Mississippi River Bridge

Location: Hamilton County, Keokuk County

State: IL, IA

Request submitted by: DOT/FHWA/H.A. Willard

Date received: 9/17/79

Additional information received: 11/13/79

Opinion of the State Historic Preservation Officer:

Eligible

Not Eligible

No Response

Comments:

The Secretary of the Interior has determined that this property is:

Eligible

Applicable criteria: C

Not Eligible

Comments:

Documentation insufficient

(Please see accompanying sheet explaining additional materials required)

Care D. Skuff
Keeper of the National Register

EXHIBIT 7

Date: 11-20-79

EO. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION
National Register of Historic Places
Heritage Conservation and Recreation Service

Name of property: Thomas Lester House

Location: 18 North First Street, Keokuk, Lee County

State: IA

Request submitted by: DOT/FHWA/H.A. Willard

Date received: 12/13/79

Additional information received:

Opinion of the State Historic Preservation Officer:

Eligible

Not Eligible

No Response

Comments:

The Secretary of the Interior has determined that this property is:

Eligible Applicable criteria: A C

Not Eligible

Comments: 36 CFR Part 63.3
Determination

Documentation insufficient

(Please see accompanying sheet explaining additional materials required)

Caree D Shuel

Acting Keeper of the National Register

EXHIBIT 8

Date: 1-3-80

(7)

STATEMENT OF FINDING

Mississippi River Bridge - BRF-19-1(2)
Keokuk, Iowa/Hamilton, Illinois

The subject project proposes a Mississippi River replacement bridge for US Highway 136 utilizing Special Bridge Replacement funds allocated under Section 144, Title 23 USC.

The location for a replacement bridge has been thoroughly studied with locations 2 and 3 determined to be the only viable alternatives based on socio-environmental impact, traffic service and least investment of public funds. See attachment 1 for location of alternates studied.

Pursuant to Part 800, Title 36, the effect of Alternates 2 and 3 on National Register or eligible properties has been evaluated. The Federal Highway Administration (FHWA) in consultation with the Iowa and Illinois State Historic Preservation Officers (SHPO's) have applied the Criteria of Effect with the following determinations:

Neither Alternate 2 nor 3 will have any effect on sites of historic architectural or archeological significance on the Illinois side.

Neither Alternate 2 nor 3 has an effect on the existing Mississippi River Bridge or Structure 19 (Lock and Dam). However, the high grade line necessary for Alternate 2 results in a visual intrusion between these two historic structures that should be avoided if a practicable alternative exists.

Alternate 2 has an adverse effect on the Thomas Lester House (18 North First Street, Keokuk) and will require consultation process with the Advisory Council on Historic Preservation (ACHP) as set forth in Section 800.6, prior to approval of Alternate 2 as the location for the replacement bridge.

Removal of the highway approaches to the existing bridge up to the diagonal end chord of the first river span from the Iowa and Illinois shore (railroad abutments) will not alter a no effect finding. The decision whether these approaches are to be removed is left to be determined during design stage and based on need of the city. The highway bridge will be closed to vehicle traffic.

The above findings are based on a review of the location study and a May 7, 1980, field review by the Iowa State Historic Preservation Officer, the Cultural Resource Coordinator of the Illinois SHPO, and a representative of the FHWA. Also participating in the May 7 review were representatives of the Iowa Department of Transportation (Iowa DOT) and Office of Iowa Archeology.

Alvin D. Anderson 6/30/80
Iowa State Historic Preservation Officer Date

David K... 7/16/80
Illinois State Historic Preservation Officer Date

John A. ... 7/1/1980
Federal Highway Administration Date

10. LETTERS OF COMMENT AND RESPONSES

The preliminary 4(f) Statement was distributed to federal agencies and the City of Keokuk on February 10, 1981. Following are letters of comment which were received by the sign-off date of April 6, 1981, and the disposition of those comments.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER 81/233

MAR 20 1981

Mr. Hubert A. Willard
Division Administrator
Federal Highway Administration
105 6th Street
P.O. Box 627
Ames, Iowa 50010

Dear Mr. Willard:

This is in response to the request for the Department of the Interior's review and comments on the draft Section 4(f) statement for the US-136 Mississippi River Bridge, Lee County, Iowa and Hancock County, Illinois.

GENERAL COMMENTS

This document demonstrates exemplary coordination with both fish and wildlife, and park and recreation, agencies at the Federal, State, and local level. Such thorough consultation during project development has not only resolved potentially serious problems, but has, as a result, allowed our expeditious review pursuant to Section 4(f) and other environmental laws.

SECTION 4(f) COMMENTS

We concur that there is no feasible and prudent alternative to the use of lands from Victory Park for bridge piers, as required by Alternative 3. The proposed mitigation measures and consultations show that the proposed project includes all possible planning to minimize harm to the park.

We note that implementation of the recommended alignment calls for closing the Keokuk Municipal Bridge (a significant historic property) to highway traffic, which will likely result in removal of the highway deck and approach spans. Consequently, construction of the new bridge would create a use of the existing bridge within the meaning of Section 4(f). However, we would concur that there is no feasible and prudent alternative to such use. Documentation of this bridge to National Architectural and Engineering Record (NAER) Standards would constitute appropriate mitigation.

FISH AND WILDLIFE COORDINATION ACT COMMENTS

Although project impacts on bald eagle wintering activities are not discussed in detail, we recognize that none of the wintering habitat traversed by Alternative 3 is in public ownership, and thus is not subject to Section 4(f). Furthermore, it is apparent that potential impacts to the bald eagle have been given thorough consideration in selecting a preferred alternative, and that comprehensive mitigation measures have been agreed to by the Illinois Department of Transportation.

Since the draft Section 4(f) statement does not contain detailed design information for the new bridge, the above comments do not preclude separate evaluation and comment by the U.S. Fish and Wildlife Service (FWS) when reviewing permits required from the U.S. Coast Guard and the U.S. Army Corps of Engineers pursuant to Sections 9 and 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. At such time as design details are available, the FWS will review the applications to determine anticipated project impacts to fish and wildlife resources. Our tentative position is not to object to the issuance of such permits provided that the conditions outlined in Appendices D, E, and F of the draft Section 4(f) statement are incorporated into project plans.

SUMMARY COMMENTS

We concur that there is no feasible and prudent alternative to the use of Section 4(f) lands as proposed in Alternative 3. If mitigation for impacts to the Keokuk Municipal Bridge is incorporated into project plans (i.e., documentation to NAER Standards prior to alteration or demolition), we would concur that the project includes all possible planning to minimize harm, and would offer no objection to Section 4(f) approval.

Sincerely,



Special Assistant to
~~Assistant~~ SECRETARY

cc: IA-DOT

U.S. DEPARTMENT OF INTERIOR

1. Prior to alteration or demolition, the bridge will be documented to National Architectural and Engineering Record (NAER) Standards.
2. At such time as design plans are completed, further coordination will be undertaken pursuant to obtaining the necessary U.S. Army Corps of Engineers and U.S. Coast Guard permits.

CITY OF KEOKUK

MUNICIPAL BUILDING
KEOKUK, IOWA
52632

ROBERT L. SEABOLD — MAYOR

ALDERMEN

CHARLES S. ABELL — AT LARGE	DAVID HARMON — 4TH WARD
L. J. "ROY" DENNIS — AT LARGE	R. TERRY HALSTEAD — 5TH WARD
MARGARET A. KREIS — 1ST WARD	JAMES SHUMAN — 6TH WARD
JAMES SMITH — 2ND WARD	KENNETH BULLIS — 7TH WARD
ALBERT HILMER — 3RD WARD	

J. A. FINERTY — CITY CLERK
TELEPHONE 319-524-2050

March 26, 1981

Re: U.S. 136
Lee County
BRF-19-1

Mr. Harry S. Budd
Planning & Research Div.
Department of Transportation
800 Lincoln Way
Ames, IA 50010

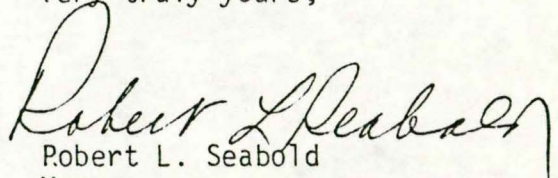
Dear Mr. Budd:

This is to acknowledge receipt of one copy of the Preliminary Section 4(f) Statement as prepared for the proposed U.S. 136 Mississippi River Bridge at Keokuk.

I am enclosing a copy of Resolution No. 531 passed by the Keokuk City Council, which establishes the preferences at this time for disposition of the present bridge once vehicular traffic is transferred to the new bridge.

I have no other comments at this time pertaining to the Preliminary Section 4(f) Statement.

Very truly yours,


Robert L. Seabold
Mayor

RLS/1kf

Enc.

RESOLUTION NO. 531

WHEREAS, a new bridge is planned for construction across the Mississippi River connecting Keokuk, Iowa and Hamilton, Illinois.

WHEREAS, disposition of the present bridge, following transfer of vehicular traffic from the present to the new bridge, must be determined; now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF KEOKUK, IOWA:

THAT, the City's preferences concerning the disposition of the old bridge be as follows:

- 1st Preference - Transfer of ownership of the present bridge to the TP & W Railroad following transfer of vehicular traffic to the new bridge.
- 2nd Preference - Demolition of the present structure due to the City's financial inability to maintain it for railroad use only for an indefinite period of time.

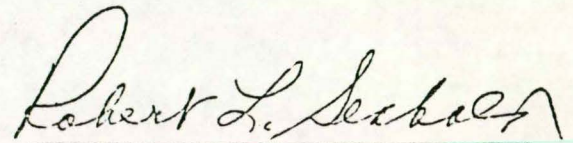
Moved by Halstead

Seconded by Dennis

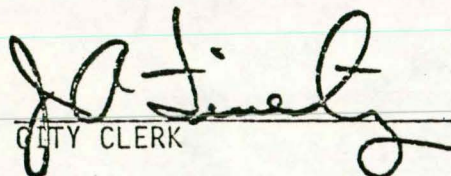
Passed this 19th day of February, 1981

ROLL CALL: ABELL-Aye DENNIS-Aye KREIS-Aye SMITH-Aye
HILMER-Aye HARMON-Aye HALSTEAD-Aye SHUMAN-Aye

Ayes-8 Nays-0
Vacancy-1


MAYOR

ATTEST:


CITY CLERK

CITY OF KEOKUK

1. The City's preferences for disposition of the existing bridge are noted. As indicated on page 16, the construction of the recommended alignment would have no effect on the existing structure with the exception of removing highway traffic. Final disposition of the bridge is a City matter, and will depend upon negotiations by the City to transfer the existing bridge to the T.P. & W. Railroad (or other party) and upon a final determination of the City's responsibility to maintain the bridge for continued rail service.



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

OMAHA AREA OFFICE

UNIVAC BUILDING, 7100 WEST CENTER ROAD

OMAHA, NEBRASKA 68106

REGION VII

March 31, 1981

IN REPLY REFER TO:

7.2SS

Mr. Harry S. Budd
Project Planning Engineer
Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

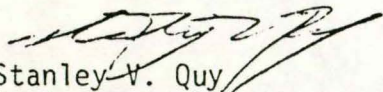
Dear Mr. Budd:

I have received the Draft Environmental Statement for the Mississippi River Bridge at Keokuk, Iowa, and have found the document to be satisfactory in meeting the spirit and intent of the National Environmental Policy Act of 1969. It is further recommended that Alternate 3 be approved as the most feasible and acceptable alternative.

This determination was made on the basis of the following considerations:

- (1) HUD's areas of review responsibility in accordance with NEPA, and
- (2) HUD's activities in the Keokuk, Iowa area that might be affected by the Environmental Statement.

Sincerely,


Stanley V. Quay
Environmental Officer

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

1. No comment necessary.

APPENDIX

CITY OF KEOKUK

MUNICIPAL BUILDING
KEOKUK, IOWA
52601

ROBERT L. SEABOLD — MAYOR

ALDERMEN

CHARLES S. ABELL — AT LARGE	DAVID HARMON — 4TH WARD
L. J. "ROY" DENNIS — AT LARGE	R. TERRY HALSTEAD — 5TH WARD
MARGARET A. KREIS — 1ST WARD	JAMES SHUMAN — 6TH WARD
JAMES SMITH — 2ND WARD	KENNETH BULLIS — 7TH WARD
ALBERT HILMER — 3RD WARD	

J. A. FINERTY — CITY CLERK
TELEPHONE 319-524-2050

October 17, 1980

George Forsythe
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear George:

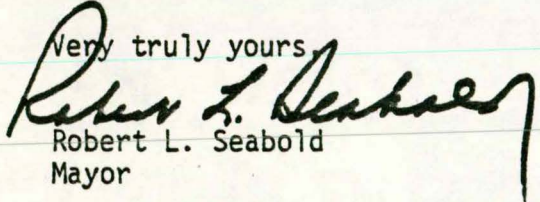
Please be advised that the Keokuk City Council has adopted the following preliminary position concerning the Victory Park area:

1. The bridge will have an overall, positive effect on the Victory Park recreational area.
2. The Veranda Building Arch and Curtis Statue should be moved upriver to form a grotto or viewing area for these monuments.
3. A pedestrian ramp should be constructed to connect Victory Park to the Lock and Dam #19 area to provide continuous pedestrian access to the entire riverfront viewing area. This item is also in conjunction with the Corps of Engineers request for the City's cooperation in developing the old Lock #19 and dry dock area as a tourist attraction.
4. Victory Park should be regraded in conjunction with the monument moving and pier construction operations.
5. The bridge should be lighted on the underneath side to reduce group loitering and vandalism.
6. Construction should include street access to the Victory Park area from the 2nd & Main intersection to improve and define the access to the various recreational facilities in the area.

This was adopted as the preliminary position of the Council due to the extremely short time-frame that the Council had to review the Recreation Board's recommendations. I doubt there will be any significant change in these items and I wanted to forward them to you at this time in order to avoid any unnecessary delays in the bridge project.

Please contact me if you need any additional information.

Very truly yours,


Robert L. Seabold
Mayor

lh

EXHIBIT A



Department of Transportation

PLANNING AND RESEARCH DIVISION

800 LINCOLN WAY AMES, IOWA 50010 515.296.1661

December 9, 1980

REF. NO. BRF-19-1(2)--38-56
Keokuk Bridge - U.S. 136
Lee County

The Honorable Robert L. Seabold
Mayor of the City of Keokuk
City Hall
415 Blondeau
Keokuk, IA 52632

Dear Bob:

Concerning the city's preliminary position on Victory Park as stated in your letter of October 17, 1980, the staff of the Department has met and agreed to the following:

The Department shall relocate the Veranda Building Arch and the Curtis Statue up-river to a site within the park of the city's choosing. In conjunction with this, the Department shall regrade the site under the presumption that such regrading will be of an incidental nature to the normal grading operations required for construction of the bridge. In order that a job satisfactory to the city is obtained, the Department may ask the city to relocate the monuments and then reimburse the city for the costs.

The Department will construct a pedestrian ramp crossing the railroad grade and connecting Victory Park with the Corp's Lock and Dam Facility north of the park. The city shall then be responsible for all future maintenance of the ramp and any liability associated with the ramp.

The Department shall install lighting under the bridge. The city shall be responsible for future maintenance of the lighting and for the energy costs associated with the lighting.

The Department will construct, if feasible, a connection from First Street to Second Street at approximately mid-block between Main Street and Blondeau. This connection will become a city street, and all future maintenance of the street will be a city responsibility.

Please review these items with your staff and council. If they are agreeable, please send a letter confirming this.

Concerning your letter of October 16, 1980, about the Pre-Design Agreement #80-P-007, I have not yet been able to obtain the clarification you are seeking. I hope to have the clarification by next week.

COMMISSIONERS

I. BUSKER
x City

BARBARA DUNN
Des Moines

C. ROGER FAIR
Davenport

DONALD K. GARDNER
Cedar Rapids

WILLIAM F. McGRATH
Meiose

ROBERT R. RIGLER
New Hampton

EXHIBIT B

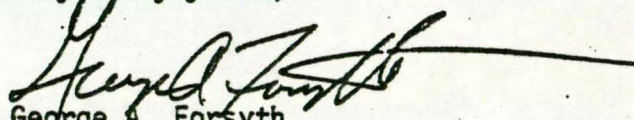
BRUCE H. VAN DRUFF
Burlington

Robert L. Seabold
Page 2
December 9, 1980

BRF-19-1(2)--38-56
Keokuk Bridge - U.S. 136
Lee County

If you have any questions regarding the above, please feel free to contact me.

Very truly yours,


George A. Forsyth
Consultant Coordinator

GAF/pas

cc: C. I. MacGillivray
Director-Planning & Research
Iowa DOT

Harry S. Budd
Project Planning Engineer
Iowa DOT

George Calvert
Deputy Director-Development
Iowa DOT

George Sisson
Office of Road Design
Iowa DOT

Chuck Pestotnik
Office of Bridge Design
Iowa DOT

C. C. Kauffman
FHWA

William Burns
District 6 Engineer
Illinois DOT

James L. Riggs
Project Manager
Howard, Needles, Tammen & Bergendoff

~~CITY OF KEOKUK~~

~~MUNICIPAL BUILDING
KEOKUK, IOWA
52602~~

ROBERT L. SEABOLD — MAYOR

ALDERMEN

CHARLES S. ABELL — AT LARGE	DAVID HARMON — 4TH WARD
L. J. "ROY" DENNIS — AT LARGE	R. TERRY HALSTEAD — 5TH WARD
MARGARET A. KREIS — 1ST WARD	JAMES SHUMAN — 6TH WARD
JAMES SMITH — 2ND WARD	KENNETH BULLIS — 7TH WARD
ALBERT HILMER — 3RD WARD	

J. A. FINERTY — CITY CLERK
TELEPHONE 319-524-2050

January 16, 1981

Ref. No. BRF-19-1(2)--38-56
Keokuk Bridge - U. S. 136
Lee County

Mr. George A. Forsyth,
Consultant Coordinator
Planning and Research Div.
Iowa Dept. of Transportation
800 Lincolnway
Ames, IA 50010

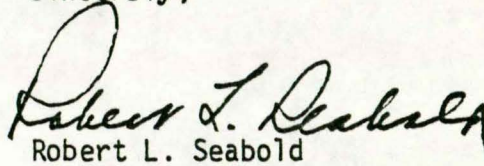
Dear Mr. Forsyth:

In response to your letter of December 9th, I am pleased to advise that the Keokuk City Council has approved the Victory Park mitigating measures as specified.

If you need further information, please advise.

Thanks very much.

Sincerely,


Robert L. Seabold
Mayor

RLS/1kf

Enc.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Federal Building, Fort Snelling

Twin Cities, Minnesota 55111

Mr. H.A. Willard
Division Administrator
Region 7
U.S. Department of Transportation
Federal Highway Administration
P.O. Box 627
Ames, Iowa 50010

NOV 7 1979

Dear Mr. Willard:

This is in reply to your letter of October 17, 1979 (HA-1A) regarding project Iowa-Illinois BRF-19-1(2), the proposed Keokuk, Iowa-Hamilton, Illinois, replacement bridge over the Mississippi River.

The Federal Highway Administration has concluded that alternatives 2 and 3 are the only practicable alternatives due to traffic service, costs, and/or environmental impacts. Your letter also indicated that the bald eagle (Haliaeetus leucocephalus) was the only species that might be impacted by either of these alternatives.

I concur with the findings of the biological assessment and as a result, it is my biological opinion that the project, as currently planned, will not jeopardize the continued existence of any federally listed species. In the case of the bald eagle the no jeopardy opinion is contingent upon the fulfillment of the following conditions.

1. Construction activities will be prohibited from November through March on the east bank of the river when eagles are likely to utilize the area.
2. Right-of-way clearing will be limited to actual requirements for construction and movement of construction equipment.
3. Right-of-way will be landscaped with suitable evergreen trees and shrubs to screen the approaches and blend in with the natural floodplain forests. Larger trees should be a minimum of 20 feet high when planted to provide maximum canopy in a minimum of time.
4. Pedestrian traffic on the existing Keokuk Municipal Bridge will be eliminated. A pedestrian walkway can be provided on the replacement bridge.

EXHIBIT D



file - 9
U.S. 120
Keokuk Bridge



ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

Established in 1972 by the Illinois General Assembly

July 15, 1980

Mr. W.E. Burns
District Engineer
Illinois Department of Transportation
126 East Ash Street
Springfield, Illinois 62706

Dear Mr. Burns:

The Board wishes to express its appreciation for your efforts towards providing the necessary technical information on the Bald Eagle use of the Lock and Dam 19 area for their review. Dr. Dunstan's presentation at the 28th Board Meeting was extremely helpful in making a recommendation. The following motion was passed unanimously.

The Illinois Endangered Species Protection Board recommends selection of bridge alternatives 3, 4, or 2, in that order, provided that mitigation measures as described by the Board, in consultation with Dr. Dunstan, can be accomplished. If these mitigating measures cannot be accomplished the Board recommends alternatives 1 or 5 with their appropriate mitigation measures.

The mitigation measures developed by the Board in consultation with Dr. Dunstan are attached. The Board feels that these measures are reasonable and looks forward to your response and cooperation.

Sincerely,

Carl N. Becker
Coordinator
Endangered Species Program

CNB:v1

cc: G. Forsythe
J. Hart

Handwritten notes and stamps:
- Vertical stamp: 0 1/11 7-24
- Vertical stamp: 0 000 7/28
- Vertical stamp: 0 0 7/28
- Vertical stamp: 0 0 7/29
- Vertical stamp: 0 188B 7/25
- Stamp: EXHIBIT E

MITIGATION MEASURES FOR BRIDGE

ALTERNATIVES 3, 4, and 2, 1 and 5

A. Alternatives 3, 4 and 2

1. Secure through fee simple purchase, easement, or lease the land north of the existing bridge and U.S. 136 north to the north boundary of the cultivated field (Figure 1) to assure that the land can be managed in a manner favorable to Bald Eagles.
2. Secure through fee simple purchase, easement, or lease the river front and all or most of the land between alternates 3 and 5 out to Warsaw Road to assure that the land can be managed in a manner favorable to Bald Eagles.
3. Bridge construction should be staged to avoid operation of heavy construction equipment and the presence of work crews in the Bald Eagle feeding and resting areas during the winter months - November through March.
4. Right-of-way clearing be kept to an absolute minimum and not to extend beyond the maximum width of the right-of-way. Every effort should be made to retain as much natural vegetation (trees) as possible within the right-of-way.
5. Equipment staging and material storage areas should not be located in areas that will impact or are used by eagles.
6. Borrow areas will be mutually agreed upon by the Departments of Conservation and Transportation.
7. Plant right-of-way with suitable evergreen trees or other trees to buffer eagle use areas from the roadway.
8. Plant suitable tree species as necessary to replace perch trees lost to construction and in the interim, install artificial perch trees, as designed by Dr. Dunstan, to replace perch trees lost to construction.
9. Closure of Montebello Access Area and other management lands from December 1 to March 1.
10. A formal Bald Eagle viewing area should be provided on the Iowa side for the public. This should be done in conjunction with closing the Montebello Access Area.
11. Prohibit pedestrian traffic on the existing bridge as soon as possible.
12. Support a study to document the effects of construction and operation of the new bridge on eagles. Information gathered will be of value to predict impact more exactly and recommend mitigation measures for similar projects.
13. If it is determined that the boat access at Montebello is to be replaced it must be located and constructed in a manner that will not remove any habitat used by eagles.

B. Alternative 1

1. No mitigation required for Bald Eagles.

C. Alternative 5

1. Plant right-of-way with suitable evergreen trees or other trees along the northeast side of the roadway to Warsaw Road to buffer the eagle use areas from the roadway.
2. Same as A. 4, 5, 6, 11, and 12.

Prepared by the Illinois Endangered Species Protection Board, 11 July 1980.



Illinois Department of Transportation

Division of Highways/District 6
126 East Ash Street/Springfield, Illinois/62706

October 7, 1980

Mr. George Forsyth
Iowa Department of Transportation
Planning & Research Division
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Forsyth:

Enclosed please find a copy of the formal executed agreement between the Illinois Department of Transportation and the Illinois Department of Conservation. We have also enclosed Dr. Dunstan's justification letter, the Illinois Department of Conservation's concurrence letter, and a formal response to the Illinois Endangered Species Protection Board.

If you have any questions concerning the enclosed material, please contact us.

Very truly yours,

W. E. Burns

W. E. Burns
District Engineer

RRM:RJN/ad

Encl.

cc: C. Kauffman
J. Riggs

MITIGATION MEASURES FOR KEOKUK BRIDGE

(ALTERNATE 3)

The Illinois Department of Transportation ("IDOT") and the Illinois Department of Conservation ("IDOC") hereby agree that the following measures are adequate and appropriate to mitigate for the disruption of bald eagle habitat caused by the construction and operation of a new bridge crossing the Mississippi River at or near Keokuk, Iowa and Hamilton, Illinois at the location designated by the IDOT as "Alternate 3":

1. The Illinois Department of Transportation will secure, through fee simple purchase, easement, lease or other land use control, the land described as critical bald eagle habitat compensation lands, to adequately replace both lands physically used for highway construction and bald eagle habitat adjacent to the proposed right-of-way which will be adversely impacted by its proximity of the proposed roadway and bridge. The minimum boundary of critical replacement/compensation land, as determined by the Illinois Department of Conservation is that wooded area bounded on the north by the proposed highway right-of-way and extending southwesterly along the Mississippi River shoreline to the mouth of Crystal Glenn Creek. The boundary line then continues southeasterly, perpendicular to the Mississippi River, to a point along the treeline just west of a peninsula of trees extending into the cultivated field. The boundary then follows the treeline northeastward to the powerline right-of-way. The final boundary section follows the powerline right-of-way northward till it intersects the proposed highway right-of-way line. It is estimated that this wooded tract contains approximately sixty-four (64) acres. A final delineation of the boundary may be expanded or made subject to existing property lines provided any encroachment of the proposed boundary into the tract described above is agreed to by the Department of Conservation. (See figure 1.)
2. The IDOC shall have jurisdiction over the land described in item number 1 above and shall manage that property in a manner compatible with bald eagle use.
3. Bridge construction will be staged to avoid operation of heavy construction equipment and the presence of work crews in the bald eagle feeding and resting areas from November 15 through March 1.
4. Right-of-way clearing will be kept to an absolute minimum and will not extend beyond the maximum width of the right of way. Every effort will be made to retain as much natural vegetation (e.g., trees) as possible within the right-of-way.

5. Equipment staging areas, material storage areas, and borrow excavation areas will be located in consultation with the Illinois Department of Conservation to assure they will not adversely impact prime bald eagle habitat or sensitive ecological areas. An attempt will be made to locate all such areas outside the floodplain.
6. The IDOT, with the aid and advice of the IDOC, will plant the right of way with suitable evergreen trees or other suitable trees to buffer and screen eagle use areas from the roadway sections critical to the sustained use of adjacent bald eagle habitat. Placement, quantity, size, and species of these trees will be determined in consultation with the IDOC as landscape plans are prepared. The approach to the bridge will be designed with the advice of IDOC to minimize impacts on existing trees and to accommodate the newly-introduced buffer trees.
7. The IDOT will, with the advice and aid of the IDOC on property made available for such planting, plant suitable tree species necessary to replace perch trees lost to construction. In addition, IDOT will do one or more of the following:
 - a. Provide artificial perches designed by Dr. Dunstan,
 - b. Erect fallen trees suitable for eagle use, or
 - c. Prune or clear existing trees to accommodate eagle usage.

IDOC will be responsible for the maintenance of these perches after their establishment. IDOT will initially install three or four different artificial perch structures as designed and located by Dr. Dunstan. A total establishment of eight to ten perching structures will depend on the success of the initial trial structures.

8. IDOC will manage the Montebello Access Area and other management lands in a manner compatible with eagle use.
9. The Illinois Departments of Transportation and Conservation understand that the Iowa Department of Transportation has agreed to provide a bald eagle viewing area on the Iowa side of the Mississippi River. This area will be open to the public and will be operated in conjunction with the closing of the Montebello Access Area.

10. To the extent permitted by law, the Illinois DOT will close the existing bridge to pedestrians as soon as possible after the closure of that bridge to vehicular traffic.
11. The Illinois Department of Transportation will cost share with the Illinois Department of Conservation on a study to document the effects of construction and operation of the new bridge on wintering bald eagles. The scope of the study will be developed jointly.
12. With respect to the activities described in this document, the Illinois Department of Conservation agrees to consult with the Illinois Endangered Species Protection Board.

John D. Farmer
Secretary, Illinois Department
of Transportation

David Benny
Director, Illinois Department
of Conservation

Dated: 25 September 1980

Dated: 25 Sept 1980



DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT CORPS OF ENGINEERS
CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61201

REPLY TO
ATTENTION OF:

2 APR 1980

NCROD

Mr. James L. Riggs
Howard Needles Tammen & Bergendoff
1805 Grand Avenue
Kansas City, Missouri 64108

Dear Mr. Riggs:

In reference to your 7 April 1980 letter concerning the Mississippi River Bridge Study, the cleared channel dimensions as shown on both Alternatives 2 and 3 are acceptable to the Corps of Engineers, since they will provide adequate clearance for both maintenance access to the existing structures and reasonable approaches to Lock 19 at Keokuk. Alternate 3 is still the best alternative presented for the river crossing at Keokuk. Certainly this alternative will cause no disruption to river traffic during its construction, and it will not interfere in the future maintenance of Lock 19. Alternate 2 still presents real hazards to our lock personnel and, during high flows, could still hamper maintenance work at the lock site.

Aside from our concerns for the continuing operation and maintenance of Lock 19, Alternate 3 appears to also be the least disruptive to the City of Keokuk. No buildings are involved and no additional land purchases within the city would be required. Your proposed design should eliminate any problems to the Presbyterian Church with reference to traffic noise and would perhaps actually increase parking area for them on the portion of Main Street that would be under the span. Your design would appear to indicate that the lower portion of Main Street from Second Street riverward would no longer be used for thru traffic.

The extension of the guidewall as presented in Alternate 3 would be a definite asset to river navigation, since it would provide a larger area of low-velocity currents in the final approach to Lock 19. On the Illinois side, Alternate 3 would route thru traffic downstream and provide more of a clear, open area for the eagles to use during their short winter stay. This alternate would also appear to make policing of the area by the State of Illinois more practicable when the recreation area is closed. It has been my observation that the eagles are little disturbed by passings of trains and other mechanical devices. They seem only to resort to flight when disturbed by people outside of vehicles.

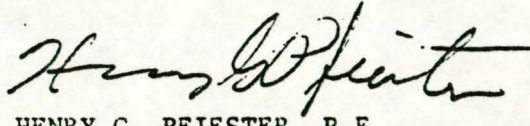
EXHIBIT G

NCRON

Mr. James L. Riggs

I feel that the disruptions of Alternate 2 through the possible future maintenance requirements of Lock 19, plus the daily hazard it would present to our lock personnel at this location, make it unacceptable and it would appear to me that the only possible adverse effect of Alternate 3 is a possible disruption of a short-term roosting and feeding area used by Bald Eagles during the winter.

Sincerely yours,



HENRY G. PFIESTER, P.E.
Chief, Operations Division