Received by SHPO
9/12/2017

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 National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. 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 certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name Third Street SE Bridge (FHWA No. 012250)

other names/site number IA Inventory #09-01860; Green Bridge; Harmon Street Bridge; Brookwood Park Bridge

2. Location

street & number Third St SE over the Cedar River bet. 5th Ave SE and 6th Ave SE ☐ not for publication

city or town Waverly ☐ vicinity

state Iowa code IA county Bremer code 017 zip code 50677

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _X_ 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 _X_ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide _X_ local

Signature of certifying official/Title Date

State or Federal agency/bureau or Tribal Government

In my opinion, the property _X_ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [ ] private
- [X] public - Local
- [ ] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box.)

- [ ] building(s)
- [ ] district
- [ ] site
- [X] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		objects
1		**Total**

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

Highway Bridges in Iowa: 1868-1942 MPD, #00-040 & Iowa Historic Bridge Inventory, 1992

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions.)

TRANSPORTATION: Road related (vehicular)

Current Functions
(Enter categories from instructions.)

TRANSPORTATION: road related (not in use)

7. Description

Architectural Classification
(Enter categories from instructions.)

OTHER: Riveted Pratt Through Truss

Materials
(Enter categories from instructions.)

FOUNDATION: CONCRETE
WALLS: N/A
ROOF: N/A
OTHER: SUPER STRUCTURE & DECK: STEEL
SIDEWALK: CONCRETE

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Third Street SE Bridge (FHWA No. 012250) is an example of a steel, 8-panel, riveted Pratt through truss bridge design with A-frame portal bracing and 45-degree heel strut bracing. It was built in 1916-1917 by the of cement contractors Charles H. and Joseph H. Russell of Waverly and the Illinois Steel Bridge Co. headquartered in Jacksonville, Illinois. It remains a well-preserved example of its type. The bridge project was sponsored by the Bremer County Board of Supervisors based on a design by the Iowa. State Highway Commission. Such sponsorship and design work was a common practice for bridges in the state at the time despite its in-town location. The bridge crosses an east-west section of the Cedar River as it passes through several residential neighborhoods in the southeast quadrant of Waverly. The bridge is under the ownership and responsibility of the City of Waverly in 2017. Plans for the bridge are currently being debated.

Narrative Description

Site:

The site for the Third Street SE Bridge (FHWA No. 012250) is in the southeast quadrant of Waverly five blocks south of the central business district (*Waverly East Bremer Avenue Commercial Historic District* – NRHP-listed) and immediately adjacent to the south edge of a ten-block residential neighborhood (*Old Fourth Ward Historic District* – NRHP-listed). The opposite end of the bridge connects to Brookwood Park and passes through surrounding residential blocks. The river bank areas on both sides of the Cedar River contain moderate to steep edges with water levels varying seasonally. Flood level is 12 feet and the record flood level was 19.33 feet set in June 2008. When planning for the bridge commenced in the years leading up to its construction in 1916-1917, this north-south street was selected as the best crossing site based on both established street patterns north of the river and existing access routes to outlying roads south of town.

The residential lots in the neighborhood have generally rectangular shapes with most following the original single lot lines or those of combined double-lot parcels. Other parcels represent subdivided lots from when smaller parcels in the neighborhood developed in the early 20th century. North of the bridge, the streets are laid out in a grid system with dead-ends for both the avenues and streets as they approach the river. Access across the Cedar River leading to the south outside of the historic district is via the bridge approach that is aligned with the most prominent street route in the neighborhood - Third Street SE. Note that "streets" extend north and south while "avenues" extend east and west in the neighborhood and throughout Waverly.

The residential blocks in the *Old Fourth Ward Historic District* contain a mix of moderate and large-scale houses dating from the latter decades of the 19th century and first half of the 20th century. The platting of lots allowing construction of primary façades fronting on both east-west streets and north-south avenues. The bend in the Cedar River saw rear yards front on it and primary facades face away as the river turned from its north-south course to an east-west route passing beneath the bridge at Third Street. Third Street SE was first originally named First Madison Street and later renamed Harmon Street. After a major street renaming ordinance passed in 1930, Harmon Street took the name Third Street SE and the bridge name currently in use was adopted sometime after 1970 when the bridge saw a rehabilitation by the City of Waverly.

Bridge Description:

The Third Street SE Bridge (FHWA No. 012250) is a steel, 8-panel, riveted Pratt through truss bridge design with A-frame portal bracing and 45-degree heel strut bracing. The bridge comprises three spans with a total length of 363 ft. with each of the spans measuring 121 ft. Concrete paved approaches at each end measure approximately 20 feet originally lined by balustrade sections at each end. The bridge extends over a mostly straight, 10-block long east-west stretch of the Cedar River as it passes through Waverly and Bremer County from northwest to southeast. Designed for an 18 ft. road bed, the bridge has a roadway deck width of 17.1 ft. with steel stringers and steel decking in 2017. The steel decking installed in 1982 and currently in place replaced creosoted wood block over wood planks. The vertical clearance above the deck measures 12.3 ft. A concrete sidewalk with a width of 5 ft. is suspended along the exterior upstream (west) edge of the bridge. Bridge balustrades include chain link fencing and one section of original balustrade at the north approach with diamond metalwork (see Photo 8, various figures with historic views and drawings in Figures 6-2 and 6-5 at the end of the nomination).

The sub-structure for the bridge's three spans extends between asymmetrical reinforced concrete abutments at each end of the bridge. The abutments are built in connected sections with anchoring irregular concrete at the west end perpendicular to the river beneath the bank connected to the three smooth-finished abutment sections. For the north end abutment, the longer downstream section is set at a 45° angle to the river flow and measures 29 ft.; the center section is parallel to the stream measuring 13 ft.; and the upstream section measures 14 ft. also set a 135° angle. At the south end of the bridge, the abutment is designed for a different

river bank profile that is set further back from the water level (see Photo 4). The lengths of the upstream and downstream sections are slightly shorter in length and height as a result for the south abutment. The two bridge piers have a similar reinforced concrete structures and solid shaft construction with smooth finishes. They differ in design as a result of the curved cut-away configured at their upstream ends. Representative drawings for both the abutments and piers are found in Figure 6-6 and images are found in Photos 3, 4, and 5.

The Third Street SE Bridge was first documented in July 1990 when bridge historians Clayton Fraser and Carl McWilliams inspected the bridge for the Iowa Department of Transportation's Iowa Historic Bridge Survey conducted by Fraserdesign. The final report titled *Historic American Building Study* (HADB #00-040) when completed in 1992 recorded information for seven of 62 extant bridges in Bremer County built prior to 1945. The Third Street SE Bridge, also known as the Harmon Street Bridge, was one of two urban bridges in the county identified by the survey team along with 55 primary and secondary bridges. Though the Third Street SE Bridge was not evaluated as National Register eligible at the time, attrition of bridges in the county and across Iowa since then and completion of additional local historical and architectural survey work discussed under section "8. Significance" (below on pp. 7-15) provides insight for why the bridge is NRHP eligible at the local level 27 years later in 2017 in this document.

Documented bridge work completed between 1917 and present day includes regular maintenance, more significant rehabilitation projects, and planning/design projects. These efforts are summarized in the list below and were completed by the current owner of the bridge – the City of Waverly:[1]

- 1950s – Creosoted wood block decking overlaid with asphalt.
- 1962 – Bridge painted green for first time; thereafter known as "Green Bridge" locally.
- 1970 bridge inspection by Wallace Kastler Schmitz & Co. resulted in a temporary bridge closure.
- 1970-71 - Ramker Construction awarded contract for $44,392 to replace and add structural members on the lower east side of the bridge; as much as 6 inches of asphalt was removed from the bridge deck. Bridge was re-opened.
- 1976 - Wayne Claassen Engineering performed first biennial bridge inspection; cited concern that the wood deck was saturated with water leaking through the cracks in the asphalt overlay. The safe capacity load was deemed to be 3 tons. The City agreed to perform deck repairs, post a 5-ton load limit, a 10-mph speed limit, and reduce the vertical clearance to 8 feet.
- 1982-83 – Wood blocking and asphalt overlay removed as decking; new steel grid decking installed; concrete surface repairs made to piers and abutments; bridge repainted green.
- 2001 - Bridge Repair/Replacement Study completed by WHKS & Co.
- 2006 - Replace sidewalk and minor below deck repairs.
- 2015 - Bridge closed February 2015.
- 2015 - VJ Engineering submits Third Street SE Bridge Evaluation & Feasibility Study.

Integrity:

The integrity of the Third Street SE Bridge (FHWA No. 012250) was first evaluated in the Fraserdesign study HADB #00-040 completed in 1992 based on the criteria and bridge rating methodology that were developed for the survey effort. The criteria and methodology were used for evaluation of nearly 8,500 Iowa highway bridges with the resulting recommendations of National Register eligibility for 209 structures. In the resulting "Highway Bridges in Iowa: 1868-1942 Multiple Property Documentation"(MPD) three aspects of "integrity" for bridges such as the Third Street SE Bridge – structural integrity, site integrity, and locational integrity were assessed. A maximum of 15 points of the bridge's total 100 point rating were related to these three items taken from the MPD as delineated on the following page. Using this physical integrity ranking system, the Third Street SE was given 15 points.

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[1]Cherry, Michael J., P.E. "Review Third Street SE Bridge Repairs 2006." Public Works Department, City of Waverly, March 21, 2006 and interviews/emails between Cherry and Marlys Svendsen, summer 2016.

Structural Integrity	
Original super- and substructure intact	5
Superstructure intact and substructure altered	3
Superstructure altered or braced	1
Bridge substantially altered, damaged, or widened	0
Site Integrity	
Excellent	5
Good	3
Fair	1
Poor or unknown	0
Locational Integrity	
Original location	5
New location, moved pre-1945	3
New location, moved post-1945 or unknown	0

In assessing the bridge's physical integrity under the 1992 Fraserdesign team's system while using its 2017 condition, the bridge's integrity rating would likely be reduced from 15 (five points for each sub-category) slightly to 13 points. The bridge retains its original location, and site integrity is high but deck work completed in 1982 changing it from wood planking to metal grid work has reduced its superstructure integrity. This new 13 point rating for integrity would cause the bridge's overall rating of 39 given by the Fraserdesign team to remain at the upper end of a Category 3 rating (not eligible, 1-39 points) but still close to the Category 2 rating (potentially eligible, 40 to 59 points). Category 1 (eligible) has a range of 60 to 100.

Other aspects of the Third Street SE Bridge (FHWA No. 012250)'s National Register eligibility according to HADB #00-040 relate to historical significance (up to 10 points); technological significance (up to 35 points) for length and type of span, geometry/configuration, and special features; and documentation (up to 30 points) for date of construction and builder. Of these point groups, the one most likely to have changed for the Third Street SE Bridge (FHWA No. 012250) since 1992 relates to local historical significance, or in this case, the history of bridge building (including relative rarity) in Bremer County and the relation of local community development and transportation history for the town of Waverly and Bremer County in the early 20th century described under Criterion A below following completion of two historical surveys in the 2010s.

A second method for evaluating the integrity of the Third Street SE Bridge (FHWA No. 012250) looks specifically at the seven measures defined under the National Register of Historic Places identified below:

- **Location**:

  The bridge retains its original 1917 location at the foot of Third Street SE/Harmon Street connecting to the south bank of the Cedar River and Bremer County's secondary road system. The primary change in location is that the area south of the river that was largely undeveloped and rural in 1917, today contains residential blocks to the south and west with Brookwood Park to the east.

- **Design:**

  The Iowa State Highway Commission design for the bridge built by the Illinois Steel Bridge Co. of Jacksonville, Illinois is intact. Its riveted Pratt through truss design retains the original configuration, dimensions, and much of its original material.

- **Setting:**

  The setting for the bridge has developed organically since 1917 beginning with the early addition of a housing subdivision on the south side of the river and later construction of residences on the north

side. However, following the flood of 2008, a number of damaged residences were razed and public space in Brookwood Park east of the bridge was expanded. The balance of the setting remains largely unchanged.

- **Materials:**

  Some of the bridge's components have experienced deterioration over time with sections of the steel super-structure such as beams, braces, and fasteners showing rust with other original material replaced in-kind during maintenance work projects. Major material changes in 1982 included installation of a new steel grid decking to replace the original wood decking and later asphalt overlay. The same year saw the installation of a concrete skim coat to the piers where deterioration had occurred. All of the steel superstructure elements remain. The replacement of the cantilevered sidewalk along the west exterior edge occurred in 2006. Other changes have occurred to the balustrade sections for the bridge itself, sidewalk and approaches at both the north and south ends. New replacements in most section include chain link fencing. The upstream balustrade of the north balustrade remains partially intact. The largest component materials of the bridge including the three-span steel super-structure and concrete sub-structure remain intact.

- **Workmanship:**

  The original workmanship remains intact for the super-structure including placement of structural components, welds, rivets or bolt fasteners. The change in color for the bridge paint suggests new workmanship. The change in decking from wood blocking to steel grids required new workmanship techniques as did the repair patching for the concrete piers and abutments. This was true for the installation of chain-link fencing to replace the diamond metalwork in the balustrade. Concrete patching reflected the same flat finishes as originally used in form work.

- **Feeling:**

  The Third Street SE Bridge's sense of feeling is defined by the retention of the structure's exposed truss design, vistas of the *Old Fourth Ward Historic District* and Brookwood Park as well as the Cedar River itself. The bridge's original more isolated location, however, overlooking the river and meadows to the south has been diminished somewhat as a result of organic housing development in the blocks south of the bridge since 1917. Despite this change in setting, the structure's prominent river crossing location and its clear view from the park and riverbank locations on both sides of the Cedar River allows the bridge to retain its sense of feeling in the post-World War I years. Another change in feeling is the result of the introduction in 1983 of a new "sound" for vehicles crossing the bridge present since 1983 as a result of the replacement of wood-asphalt clad decking by steel grid work decking.

- **Association:**

  The historic association of the Third Street SE Bridge (FHWA No. 012250) refers to the degree to which the resource has a direct link to the event, person or development for which the property is significant. In this case the bridge's association with the story of engineering for bridge building in Bremer County under the direction of the County Board of Supervisors, its construction using a bridge design engineered by the Iowa State Highway Commission, and the story of Waverly's community development and transportation history is strongly conveyed by the continued presence of this early 20th century one-lane through truss steel bridge in the midst of a residential neighborhood a century after initial construction.

The Third Street SE Bridge (FHWA No. 012250) described above is significant under Criteria A and C. It derives significance under Criterion A at the local level for its association with the NRHP themes of Community Planning and Development and Transportation in both Waverly and Bremer County. The bridge also derives

local significance under Criterion C under the theme of Engineering as a rare local example of a Pratt through Truss road bridge built using an Iowa State Highway Commission standard plan with fabrication and installation completed by a regionally prominent bridge company - the Illinois Steel Bridge Company of Jacksonville, Illinois.

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.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B Removed from its original location.
- [ ] C A birthplace or grave.
- [ ] D A cemetery.
- [ ] E A reconstructed building, object, or structure.
- [ ] F A commemorative property.
- [ ] G Less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

COMMUNITY PLANNING and DEVELOPMENT
TRANSPORTATION
ENGINEERING

Period of Significance

1917

Significant Dates

1917

Significant Person
(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

N/A

Architect/Builder

Iowa State Highway Commission (Ames)
Illinois Steel Bridge Co. (Jacksonville, Illinois)

Period of Significance (justification)

The period of significance includes the date for the completion of construction of the sole contributing resource for this nomination – the Third Street SE Bridge (FHWA No. 012250).

Criteria Considerations (explanation, if necessary)

N/A

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance and applicable criteria.)

The Third Street SE Bridge (FHWA No. 012250) is significant under Criteria A and C at the local level. The period of significance is the year 1917. This date is based on Bremer County Board of Supervisors records, and newspaper accounts for construction progress during that year and the date for when the new bridge was finally put in service in 1917. Under Criterion A, construction of the bridge is associated with Community Planning and Development efforts as well as Transportation development for the county seat at the turn of the 20th century. At this time, city wide population growth for Waverly of 50 percent occurred between 1890 and 1930 with residential building during the same four decades in southeast Waverly growing at least 56 percent according to a neighborhood survey findings. This growth in turn required construction of a second bridge across the Cedar River to undeveloped land in southeast Waverly that was under consideration for new residential and industrial development. A second major transportation route from outlying areas south of Waverly was also sought at this time. Such a bridge would facilitate railroad crossing delays as well. Under Criterion C, the new structure is significant under the theme of Engineering as an early example of a bridge based on a standardized plan prepared by the Iowa State Highway Commission (ISHC) for Iowa counties for use in both rural and town settings during the early 20th century decades. The Third Street SE Bridge (FHWA No. 012250) is important as a surviving example of a Pratt through truss road-bridge built in Bremer County using an ISHC plan that was fabricated and installed by a prominent Midwestern bridge company, the Illinois Steel Bridge Company of Jacksonville, Illinois. In addition, according to the NRHP-listed *Highway Bridges in Iowa 1868 – 1945 Multiple Property Documentation Form,* the bridge's three 121 ft. long spans qualify as "monumental spans" (a length of over 100 ft.) which, "stretched the limits of available technology... and were built much less frequently than shorter spans."[2] A more complete discussion of both Criteria A and C under the themes of Community Development and Development, Transportation history and Engineering appears below.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Background

Waverly was established in 1853 along the Cedar River in Waverly Township in southeastern Bremer County.[3] Waverly was formally incorporated in 1859, the same year that it was designated as the county seat. Like most Iowa towns established before the Civil War, growth during the early 1860s was deferred until after the war came to a close. Waverly's transportation history initially focused on railroads. Its first railroad, the Cedar Falls and Minnesota Railroad, was extended to Waverly in 1864. Eventually track was also laid for other railroad branch lines and an electric interurban. By 1917 track for the various branch lines had been absorbed by the Chicago and Great Western Railroad and the Chicago, Rock Island and Pacific Railroad. Track for the electric interurban – the Waterloo, Cedar Falls, and Northern – was laid in 1910 but usage was never as substantial as predicted.

Waverly grew in the manner typical of other Iowa county seats in the late 19th and early 20th century. Its commercial center extended along the east-west route of Bremer Avenue on both ends of the avenue's bridge that crossed the L-shaped course of the Cedar River as it passed through the center of town. This remained the only river crossing for more than six decades. The county courthouse was located outside of the commercial area on a slight prominence at the east end of Bremer Avenue. Residential districts grew up in the four quadrants formed by the intersection of the downtown's main street and the river. The broad,

[2]Fraser, Clayton B. and John J. Roberts, *National Register of Historic Places, Highway Bridges in Iowa 1868 – 1945 Multiple Property Documentation Form (HADB #00-040).* July 21, 1995 and approved April 10, 1998, p. 46.

[3]Svendsen, Marlys and Justine Zimmer, *Historical and Architectural Reconnaissance Survey for 2008 Flood Projects in Waverly, Bremer County, HADB 09-020,* (Des Moines: Iowa Homeland Security and Emergency Management Division, March 27, 2009).

generally flat profile of both the business district and early residential neighborhoods saw the regular occurrence of flooding resulting in the gradual replacement of most first generation frame building stock by more substantial buildings though not outside of the flood plain.

Bremer County and its county seat of Waverly especially prospered during the late 19th and early 20th century. It became a retail and professional services center for Bremer County and sections of adjacent Butler County. Population hovered between 2,000 and 3,000 between the Civil War and the turn of the century. By 1901 when the Chicago and Great Western Railroad's consolidation of tracks occurred, the town had grown to include 3,177 people with the downtown and rail corridors containing no less than four newspapers, several harness makers, hardware and dry goods stores, three hotels, several implement and machinery dealers, a marble works, a half dozen attorneys and an equal number of physicians, a canning factory, a brick works, and a substantial cooperage. After 1900, the county's standing as the "Dairy Spot of Iowa," gave rise to a number of dairy industries including a manufacturing plant operated by the Carnation Milk Products Company for the production of condensed milk in the 1920s. Population grew to 3,352 in 1920 slowed only briefly by World War I.

Another factor favoring development during the pre and post-World War I years came in 1916 when the Bremer County Board of Supervisors voted to build the Harmon Street (Third Street SE) Bridge in order to connect the downtown to the newly planned and eventually platted residential and factory subdivisions under development south of the Cedar River. The bridge also provided an alternative route to areas further south of the Fourth Ward. Its construction had the effect of heightening overall interest in that neighborhood. In later years, Third Street SE became the most popular and direct route to and through the Fourth Ward south of the downtown into other parts of Bremer County and points south.

During the 1940s and 1950s, Third Street SE continued to serve as an important route from the central business district south through the neighborhood to the Third Street SE Bridge and connecting to the new residential districts developing in post-war subdivisions located even further south. The fact that most children from the neighborhood attended the same new post-World War II elementary school built in the mid-1950s – Southeast Elementary School – further established a neighborhood identity that straddled the Cedar River.

Criterion A

Community Planning and Development as well as Transportation are the two NRHP themes associated with the Third Street SE Bridge (FHWA No. 012250). Prior to completion of the Third Street SE Bridge, Waverly had only one, single-lane iron bridge across the Cedar River that was located along Bremer Avenue as it connected the east and west blocks of downtown. In 2017, this bridge crossing is served by a mid-20th century bridge and is immediately adjacent to the *Waverly East Bremer Avenue Commercial Historic District* (NRHP-listed). As the Cedar River flowed south approximately four blocks from the downtown bridge, the river turned east forming a physical limit on expansion for the residential blocks or factory blocks immediately south of the Original Town plat. After turning east the river became a topographic restriction on community growth and ready access to the business district.

By the 1890s Waverly's population began a robust period of population growth (see Figure 1) creating a demand for housing in all four quadrants of the town extending away from the business district. To the south, this meant discussion began on the need for bridge to replace the wooden foot bridge and fording location for wagons at the foot of Harmon Street (now Third Street SE). Maps for 1894 and 1917 on the following page[4] show the stymying effect that the absence of a bridge in the southeast quadrant had on the residential development pattern of the community prior to 1900 and the subsequent opportunity for growth in newly platted neighborhoods south of the river after the bridge was completed in 1917. Population in Waverly grew

[4]*Bremer County Plat Book,* (Philadelphia: Union Publishing Co.), 1894, pp. 32-33; *Standard Atlas of Bremer County, Iowa,* (Chicago: George. A. Ogle & Co.), 1917, pp. 12-13.

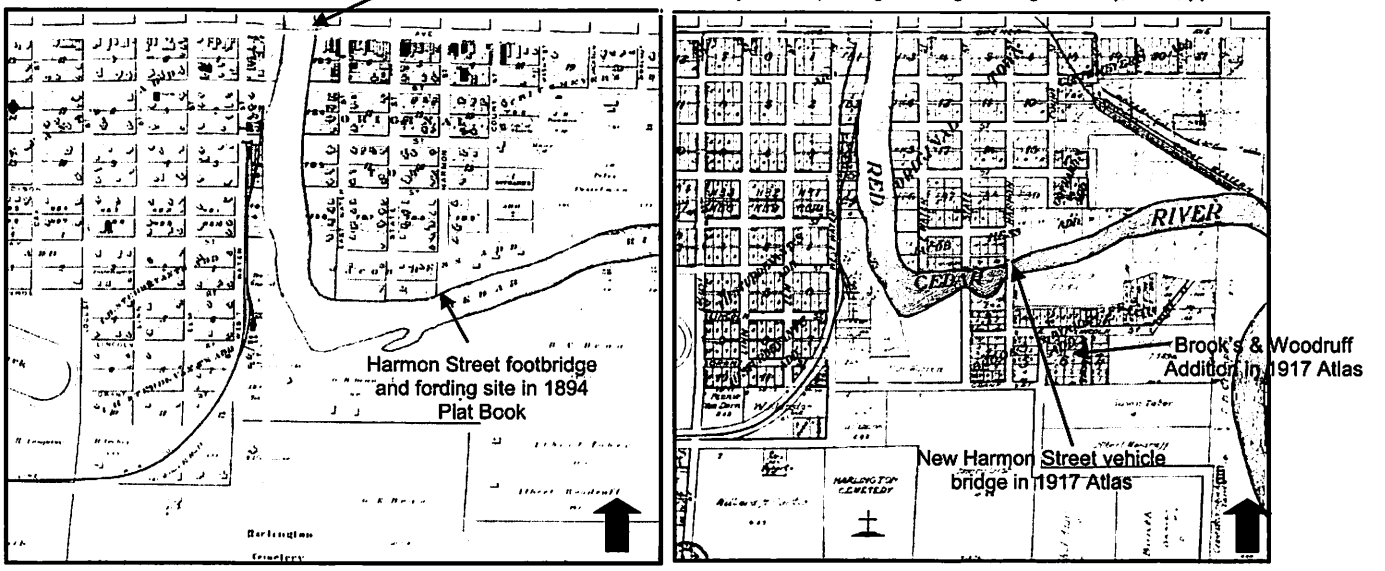
50% from 2,346 in 1890 to 3,652 in 1930. Significance under Criterion A under the theme of Community Development and Planning primarily relates to how community and county officials undertook a series of decisions to address the issue. As a newspaper account from January 1916 summarized the decision by members of the Bremer County Board of Supervisors for building the Harmon Street Bridge as follows:

> "... the structure to be built at the foot of Harmon Street connecting the south side of the city with the business section thereby opening up a residence and factory district. Heretofore it has been necessary to go to the west and then south for fully half-a-mile thence east for a greater distance to reach that part of the city which will now be within walking distance.[5]

In addition to connecting the south side of the town to the business district for residential expansion, construction of the new Harmon Street Bridge offered an alternative north-south route through Waverly when rail traffic blocked access to the Bremer Avenue Bridge within town. Such instances occurred regularly when a route was needed to the Harlington Cemetery located six blocks southwest of the Cedar River or seasonally when long trains filled with beets and other produce blocked access to packing plant sites. The new bridge was anticipated as a welcome alternative to the Bremer Avenue route.

Bremer Avenue iron wagon bridge (*Bremer County Plat Book,* (Philadelphia: Union Publishing Co.), 1894, pp. 32-33.

Bremer Avenue iron wagon bridge (*Standard Atlas of Bremer County, Iowa,* (Chicago: George. A. Ogle & Co.), 1917, pp. 12-13.



As government entities such as the Board of Supervisors carried out plans to support growth through bridge construction, leading private advocates for the bridge included people who resided south of the river in 1915. Early that year, the bridge project surfaced as a formal county priority after a petition was received from adjacent property owners in March 1915.[6] By the following January plans had been solidified. Six months later in June 1916 in response to the bridge work, private efforts advanced to the platting phase for Brook's and Woodruff's Addition (see 1917 Atlas above). Businessman William M. Brooks who owned Brooks Lumber Co. and Van Woodruff who worked as a postal clerk collaborated on the platting. Woodruff was the son of Albert Woodruff, owner of a cement contracting company and a large parcel located near the new addition that was platted. Athelia Woodruff, Van's wife, was also included as one of the addition's owners on plat records. The efforts of these platting efforts were cited in the following passages taken from the *Waverly Democrat* story published about the Board of Supervisors' decision to proceed with the bridge project in January 1916:

> "This is an improvement which has long been wanted, and it was through the untiring efforts of W. M. Brooks and Van Woodruff [both namesakes of "Brookwood" Park] that it was accomplished. They not only interested our citizens in the movement, but they secured $3,500 to be applied on the cost of

[5]"Another Bridge for Waverly," *Waverly Democrat,* January 6, 1916.
[6]"A Timeline of the Green Bridge," *Waverly* Democrat, March 19, 2015.

> construction; a large part of this sum being paid by themselves. Many of our citizens realizing the advantages to be derived from having this bridge built, also donated liberally.
>
> "That section of the city has been laid out in building lots which are being sold at reasonable prices, and already contracts have been let for new residences and it will also be an ideal factory district and without a doubt the Cedar Valley line will extend to that section of the town. The people in general are well pleased with the action of the board of supervisors in ordering this bridge built as it will bring the farming section lying to the south much closer to Waverly [Brook's and Woodruff's Addition]."[7]

Construction of the new bridge was not only associated with civic planning and population growth but also paralleled the story of local transportation efforts. As such it related how modern highway and bridge building throughout the state that began shortly after 1900, paralleled the introduction of automobiles and other farm-to-market vehicles. On April 12, 1904, the 13th Iowa General Assembly first required the registration of motor vehicles and regulated their use on the highways. By the end of the year there were 931 automobiles registered in Iowa, a number that grew sharply during the next decade to 147,078. National figures show that approximately one million vehicles were registered nationally in 1912. The Iowa Department of Transportation records that by 1915 when the decision was made by Bremer County Supervisors to add a new north-south Cedar River crossing in Waverly, the high number of the state's automobile owners gave Iowa a ranking of "first in the nation" for per capita ownership of automobiles.[8]

It was no surprise that Waverly's interest in automobiles paralleled the rapid expansion elsewhere in the state. In the 1899 City Directory for Waverly, there were no automobile related businesses listed. When the next city directory was published in 1913, Nicolas and Clark/People's Home and Auto Co – prominently advertised on the directory's first insert page the availability of their garage, automobiles and supplies. V.A. Birum took out a half-page advertisement on the directory's third insert to promote his agency as well as repair services for Abbott-Detroit, Krit, and Marion automobiles. Three other automobile businesses and motorcycle retail/repair stores were listed elsewhere in the 1913 directory.

During this period of rapid growth of automobiles, the "Good Roads Movement" encouraged demand for better roads and bridges across the state as well as in Waverly. Beginning in 1904, the State of Iowa's highway efforts were headquartered in the engineering and agriculture departments at Iowa State College (Iowa State University) in Ames. Efforts of the minimal staff focused on researching highway construction, demonstration projects, and information dissemination to county engineers. In 1911 a highway use tax was established in connection with annual registration for vehicles and two years later in 1913 the Iowa General Assembly created a separate Iowa State Highway Commission (ISHC) with supervisory responsibility for the state road system and the county and township road officials.

The same year that the ISHC was established, the Bremer County Board of Supervisors looking forward to transportation efforts under their purview such as bridge and road improvements, retained its first professional engineer to work on behalf of the county. Claude Arthur Cool, a native of Waverly, had graduated from Iowa State College (Iowa State University) with a degree in engineering in 1912. For a time thereafter he worked for the ISHC gaining practical experience in road and bridge building. On May 22, 1913 the *Waverly Republican* reported that C.A. Cool, had been appointed by the Board to serve in the capacity of county engineer for a salary of $100 per month plus expenses. Later that summer, a newspaper account shows Cool attended a statewide training session sponsored by the ISHC dealing with the new state law that reorganized the ISHC and directed the agency to "prepare standard specifications and plans for state and local roads and bridges. The [State] commissioners believed competency would be developed through standardization as well as training." The state agency training received by Cool likely proved useful in his role of overseer for planning of the new bridge at the foot of Harmon Street (Third Street SE) that the Board of Supervisors undertook in 1914-1915 in cooperation with the ISHC.

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[7]"Another Bridge for Waverly," *Waverly Democrat,* January 6, 1916.

[8]"Discovering Historic Iowa Transportation Milestones," Director's Staff Division, Iowa Department of Transportation, pp. 12, 15; available online at http://www.dot.state.ia.us/histbook.pdf; accessed 7/15/2016.

Based on standardized ISHC bridge designs, a bridge concept and drawings for the Harmon Street river crossing consisting of three 120 ft. long riveted Pratt through trusses was selected by the county. Bridge drawings were completed by December 1915 bearing the ISHC's name block as bridge designer. They were in turn used for construction bids for the first phase of work that involved building piers and abutments. The firm of Charles H. and Joseph H. Russell, cement and general contractors from Waverly, submitted the low bid for the first phase of the project on January 6, 1916. Their successful bid of $4,770 was one of fifteen received from contractors from several cities for the building of the piers and abutments."[9]

During the summer of 1916 final plans for the bridge's steel superstructure were completed and in the fall were circulated for bid.[10] On October 31, 1916, prices were received for construction of the steel bridge from seven bidders including the International Steel and Iron Co., the Federal Bridge Co., Frank J. Miller/Elkhart Bridge and Iron Co., the Des Moines Bridge and Iron Co., Iowa Bridge Co., Waterloo Construction Co. and the Illinois Steel Bridge Co. The low bid received by the Board of Supervisors was $18,780 submitted by Illinois Steel Bridge Co. headquartered in Jacksonville, Illinois. The bid was accepted at their November 2, 1916 meeting.[11] Representative ISHC bridge plan pages and shop drawings by the Illinois Steel Bridge Company appear in Figures D-1 through D-3 and E-1 through E-3 with the entire collection (hard copy and digital) maintained by the City of Waverly's Public Works Department in 2017.

Construction of the bridge proceeded under the supervision of not only County Engineer C.A. Cool, but also the three supervisors – C.H. Hastings, William Hildebrandt and Fred Schoof, chairman. By mid-summer work on the superstructure was finished but for a "lack of pitch with which to fill the crevices between the [wood] blocks on the floor of the bridge" and completion of fill work at the south end. The *Bremer County Independent* reported completion was at hand on July 19, 1917 (see article below).

—The workmen on the Harmon street bridge would have finished their work last Thursday or Friday had they not been held up on account of a lack of pitch with which to fill the crevices between the blocks on the floor of the bridge. There is still a big fill to be made at the south end of the bridge before it can be used for traffic. Southsiders, that is those who live south of the river in the Third ward are, however, using the bridge in going and coming to their work, they having placed a ladder at the south end of the bridge by means of which they climb up to the bridge.

Ownership and maintenance responsibility for the bridge was retained by Bremer County until sometime in the 1950s. By the 1960s, the maintenance of the bridge was handled by the City of Waverly Street Commissioner and the Bremer County Supervisors were no longer involved. In September 1962, contractor Joe Colburn of Nora Springs completed sand blasting of the steel superstructure and applied green paint – the first documented use of this paint color for which the bridge subsequently was named by local residents.

Since the work completed in the 1960s, periodic Iowa Department of Transportation inspections and engineering studies have been completed for the bridge. The first comprehensive condition study completed by Wallace Holland Kastler Schmitz & Co. was completed in 1970 with $44,392 in repairs completed the following year and load restrictions were reduced from 15 tons to 10 tons after the work. In 1976 the first biennial inspection of the bridge under the guidelines of the Iowa Department of Transportation was completed by Wayne Clausen Engineering and the load limit was further reduced to 5 tons. Subsequent inspections were completed by Cedar Valley Engineering Co.; Brice, Petrides & Associates; and Wallace Holland Kastler Schmitz & Co.

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[9]"Bremer County, Iowa, Proceedings of the Bremer County Board of Supervisors, Volume E (1916-1917)," January 6, 1916, Auditor's Office, Bremer County Courthouse, Waverly, Iowa.

[10]Iowa Highway Commission, Ames. Iowa. "Design for 3-120' Spans Steel Highway Bridge, Design No. 1, Bremer County," December 1915, April 1916, and June 1916, 13 drawing pages.

[11]"Bremer County, Iowa, Proceedings of the Bremer County Board of Supervisors, Volume E (1916-1917)," October 31, 1916; *Bremer County Independent-Republican*, November 2, 1916, p. 1.

In 1983 following design work completed by Cedar Valley Engineering, $145,000 of rehabilitation work was completed including the installation of a metal grate deck system and repainting of the superstructure. In 2003, the Waverly City Council formed the Third Street SE Bridge Task Force to investigate options for bridge repairs, removal or replacement. Minor repairs were completed in subsequent years until February 13, 2015 when the bridge was closed to both road and pedestrian traffic. Discussion of alternative uses including removal have continued since then.

Criterion C

The most recent large-scale historical evaluation of Iowa bridges from an engineering design perspective was published as part of the 1995 National Register of Historic Places Multiple Property Documentation Form prepared by John J. Roberts and Clayton B. Fraser for Fraserdesign in 1995; bridge survey work was completed between 1990 and 1994. The NRHP nomination included consideration of significance for bridges built in Iowa between 1868 and ca.1945 including 62 urban and rural bridges/culverts in Bremer County. Only two bridges in the county were found National Register-eligible at the time. Since then, one of the two bridges has severely deteriorated (the Green Mill Ford Bridge, listed on the NRHP June 25, 1998) and the other (the Waverly Junction Bridge) was replaced in 2001. The Third Street SE Bridge was evaluated in a statewide context at the time as not National Register-eligible. However, a re-evaluation of the bridge under Criterion C significance in this NRHP nomination is made at the local level rather than the statewide level.

Two decades after the Fraserdesign study there has been significant bridge attrition. By 2016, a large number of the 62 bridges previously individually evaluated or at least catalogued as present in Bremer County, have ceased to exist according to an informal review by Bremer County Engineer Todd Fonkert. In July 2016, Fonkert reported that approximately 225 bridges (far more than the number evaluated by Fraserdesign) that are 20 ft. and greater in length are present in the county. Fonkert also noted that the Third Street Bridge is likely the only multi-span through truss road bridge extant in the county. Fonkert's larger estimated bridge count includes bridges built since the ca. 1945 cut-off date used in the Fraserdesign survey.

According to records maintained by the Bridgehunter.com website for Iowa, the Third Street SE Bridge is one of 629 extant examples of standardized ISHC bridge designs in Iowa and is likely the only one still present in Bremer County in 2016. As noted above, the practice of the Iowa State Highway Commission to use standardized bridge designs at the county level was first mandated in 1913. This original county-owned and built bridge is an example of a three-span riveted Pratt through truss design. It dates from the latter period of bridge building using the Pratt design that was originally patented in 1844 by namesakes Thomas and Caleb Pratt. Its design history and relationship to bridge building in Iowa are summarized in the following passages by the Iowa Department of Transportation and adapted from the Fraserdesign bridge study.

> "...the Pratt design was characterized by upper chords and vertical members acting in compression, and lower chords and diagonals that acted in tension. Its parallel chords and equal panel lengths resulted in standardized sizes for the verticals, diagonals and chord member, making fabrication and assembly relatively easy. In the highly competitive bridge manufacturing industry, in which efficiency equated with profit, Pratt trusses received almost universal use. "The Pratt truss is the type most commonly used in America for spans under two hundred and fifty feet in length," noted bridge engineer J.A.L. Waddell wrote in 1916. "Its advantages are simplicity, economy of metal, and suitability for connecting to the floor and lateral systems."
>
> ...In Iowa, Pratt trusses employed pinned connections until around 1910, when rigid connections began to supersede the older technology. Private bridge companies used both structural types during the transitional period of the early 1910s. The codification of bridge design and the adoption of the riveted-Pratt configuration by the highway commission effectively ended pinned connections in 1914. After that time, numerous Iowa State Highway Commission-designed Pratt through trusses were erected at

> medium-span crossings throughout the state. Numerous examples of this design remain today [adapted from Fraser 1992]."[12]

The Fraserdesign survey completed identified seven steel through truss bridges built across the Cedar River in Bremer County between ca. 1881 and 1935. In 1911 a state highway use tax had been established in connection with annual registration for vehicles and two years later in 1913 the Iowa General Assembly created the separate Iowa State Highway Commission with supervisory responsibility for the state road system and the county and township road officials. Funding of roads and many bridges remained in the hands of county supervisors and township trustees, however. Built in 1917 by the Illinois Steel Bridge Company of Jacksonville, Illinois, the Third Street SE Bridge was constructed during the post-1913 period using a standardized bridge design prepared by the ISHC. Standardized bridge and culvert designs as well as recommended road maintenance measures had first been introduced by the predecessor agency for highways located in the College of Engineering and the College of Agriculture at Iowa State College (current day Iowa State University). A major purpose of the standardized bridge plans such as the one employed for Waverly's Harmon Street was to provide greater bridge safety, efficient use of materials, uniformity in bridge bidding competition, and reliability. Since its completion, the Third Street SE Bridge has carried vehicular and pedestrian traffic, in largely unaltered condition.

The importance of the role that the Pratt truss bridge type played in Bremer County is reflected in national bridge building trends before and after the turn of the 20th century. The Parsons Brinckerhoff and Engineering and Industrial Heritage study, *A Context for Common Historic Bridge Types,* completed for the National Cooperative Highway Research Program of the Transportation Research Council in 2005 includes several passages below that summarize the significance of the Pratt truss bridge form. The third paragraph summarizes the Pratt truss's character-defining features with those present in the Third Street SE Bridge (FHWA No. 012250) highlighted in bold italic:

> "As an iron or steel bridge, the Pratt truss became the most popular span in America in lengths of less than 250 feet for highways and railroads. The Pratt truss was erected in large numbers during the last quarter of the nineteenth century and into the first decades of the twentieth century, when it began to be superseded in popularity by the Warren truss....
>
> Significance Assessment: When fabricated entirely of iron, and later steel, with riveted connections, the Pratt truss became the American standard for bridges of moderate spans well into the 20th century. In 1916, bridge engineer J.A.L. Waddell claimed that the Pratt truss was the most commonly used truss for spans less than 250 feet.... Early examples of the type that retain their character-defining features are highly significant within the context of this study, while later, more common examples are less significant. The later examples can still be significant if they retain character-defining features and are very good examples of the type.
>
> Character-defining features vary, as there are number of different subtypes of Pratt trusses. Because the vertical members and ***end posts of the Pratt truss handle compressive forces under load, they tend to be relatively heavy and visually prominent***, and are usually composed of angles, channels or rolled sections. The diagonal members function mainly in tension and are relatively thin (the ones toward the center handle some compressive forces), and are often composed of square or round bars. The ***interior diagonals all slant down and in, at a pitch of 45 degrees***, the optimal angle calculated by the Pratts, while the inclined end posts slant outward at the same angle. Although the patent drawings illustrate a design option featuring a curved top chord, the ***basic design was for a truss with a straight top chord, and this became a common characteristic of the Pratt truss.*** Character-defining features include *the* ***truss form, method of connection, top and bottom chords, vertical and diagonal members, floor beams and stringers. For through trusses, the lateral top bracing and features of the portal (e.g., struts, bracing) are also character-defining features.***"[13]

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[12]"Pratt Trusses," Iowa Department of Transportation, Historic Bridges of Iowa; available online at: http://www.iowadot.gov/historicbridges/moreinformation.aspx?9, accessed 7/8/2016.

[13]Parsons Brinckerhoff Company and Engineering and Industrial Heritage, *A Context for Common Historic Bridge Types, NCHRP Project 25-25, Task 15*, prepared for The National Cooperative Highway Research Program

Finally, the Third Street SE Bridge derives significance under Criterion C as one of three surviving bridges in 2017 fabricated and installed in Iowa by the Illinois Steel Bridge Company of Jacksonville, Illinois. Located between Springfield, Illinois and Hannibal, Missouri, the company first operated as the Illinois Bridge and Machine Company between 1900 and 1905, changing its name to the Illinois Steel Bridge Company in 1906. It continued to operate under this name until 1962 when it was liquidated. Bridgehunters.com website has identified 64 bridges built by Illinois Steel Bridge Company located in the states of Arkansas, Illinois, Iowa, Minnesota, Missouri, Montana and Oklahoma/Texas. Of the 64 bridges identified, 37 were built between 1910 and 1919 with four built in Iowa including the Third Street SE Bridge in Waverly. The others include the Iowa 346 Bridge in Chickasaw County over the Cedar River north of Waverly that was a Parker through truss bridge erected in 1921 and replaced in 1984. The Matsell Bridge at the main entrance to the Matsell Bridge Natural Area is a steel plate girder multi-span bridge over the Wapsipinicon River some six miles northeast of Springville in eastern Linn County. It was listed on the National Register in 1998. The 120th Street Bridge in Van Buren County is a pony truss bridge built in 1915 over an unnamed creek on 120th Street. The Third Street SE Bridge is the sole surviving example of a multi-span truss bridge by the Illinois Steel Bridge Company identified in Iowa.

A partial list of National Register-listed bridges by the Illinois Steel Bridge Company nationally includes the following:[14]

- Long Meadow Bridge, Bloomington, Minnesota (Illinois Steel Bridge Co.), 1920, closed/being rehabilitated, NRHP-listed (2013)
- Duncan Mills Bridge, W of Havana, Lewistown, Illinois (Illinois Steel Bridge Co.), 1910, demolished, NRHP-listed
- Matsell Bridge, main entrance to the Matsell Bridge Natural Area, 20 miles Northeast of Cedar Rapids, IA., (Illinois Steel Bridge Co.), 1939, open to traffic, NRHP-listed (1998)
- State Highway 27 Bridge at the Guadalupe River, US 87, .13 mi. S of jct. with US 183, Cuero, Texas (Illinois Steel Bridge Company), NRHP-listed
- State Highway 71 Bridge at the Colorado River, TX 71, .8 mi E of jct. with FM 609, La Grange, Texas (Illinois Steel Bridge Company, et al.), NRHP-listed
- State Highway 78 Bridge at the Red River, OK 78, across the Red River at the OK-TX state line, Ravenna, Texas and Ravenna, Oklahoma (Illinois Steel Bridge Company, et al.), fabricator - 1937, NRHP-listed
- War Eagle Bridge, carries CR 98 over War Eagle Creek, War Eagle, Arkansas (Illinois Steel Bridge Co.), 1907, NRHP-listed

Significance Summary

In summary, the Third Street SE Bridge (FHWA No. 012250) is locally significant under Criteria A and C. It derives significance under Criterion A at the local level for its association with the NRHP themes of Community Planning and Development and Transportation in both Waverly and Bremer County. When constructed in 1917, it was the result of a conscious decision by local leaders and citizens to provide the second vehicular Cedar River crossing in Waverly serving a growing quadrant in the community's south side. Its construction was one of the most significant pre-World War I local transportation improvements and part of the evolution of the Iowa State Highway

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Transportation Research Council National Research Council, October 2005, pp. 3-25 and 3-26; available online at: http://onlinepubs.trb.org/online pubs/archive/NotesDocs/25-25(15)_FR.pdf.

[14] Bridgehunter.com website Illinois Steel Bridge Company Exhibit map; available at: https://bridgehunter.com/category/builder/illinois-steel-bridge-co/exhibit, accessed 6/21/2016.

Commission's growing importance in standardizing bridges throughout the state. Its planning and construction was facilitated by both public leadership under the Bremer County Board of Supervisors and the advocacy of private citizens led by W. M. Brooks and Van Woodruff. Its construction was carried out by the Bremer County Board of Supervisors under supervision of the county's first professionally trained engineer, Claude A. Cool, a Waverly native.

The bridge also derives local significance under Criterion C under the theme of Engineering as a rare local example of a Pratt through Truss road bridge built using an Iowa State Highway Commission standard plan with fabrication and installation completed by a regionally prominent bridge company - the Illinois Steel Bridge Company of Jacksonville, Illinois. In 2017 it is one of only three documented bridges by the company extant in Iowa and also the only surviving example of a multi-span Pratt through Truss bridge design by that company built in the state.

The potential for any prehistoric or historic archaeological remains beyond or within the footprint of the property was not assessed as part of the present National Register nomination. Given the span of this bridge across the Cedar River, any future development adjacent to this resource should include an archaeological assessment.

Developmental history/additional historic context information (if appropriate)

N/A

Acknowledgements:

This project was produced under the terms of a contract for consultant services with Svendsen Tyler, Inc. of Sarona, Wisconsin. Local assistance for preparation of this nomination was provided by the Waverly Historic Preservation Commission (HPC) and the HPC staff member in 2016-2017, Sarah Meyer-Reyerson, Director for the Waverly Public Library. Additional research assistance was provided by Mike Cherry, P.E., City of Waverly Engineer. Mapping work was completed by Ben Kohout, Community Development & Zoning Specialist for the City of Waverly's Zoning Department.

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Previous documentation on file (NPS):

___preliminary determination of individual listing (36 CFR 67 has been requested)
___previously listed in the National Register
___previously determined eligible by the National Register
___designated a National Historic Landmark
___recorded by Historic American Buildings Survey #_____
___recorded by Historic American Engineering Record # _____
___recorded by Historic American Landscape Survey # _____

Primary location of additional data:

_X_ State Historic Preservation Office
___Other State agency
___Federal agency
___Local government
___University
_X_ Other
Name of repository: **Waverly Public Library, Waverly, Iowa**

Historic Resources Survey Number (if assigned): State Inventory No. 09-01860

10. Geographical Data

Acreage of Property Less than one acre
(Do not include previously listed resource acreage.)

UTM References
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing		Zone	Easting	Northing
1	15	54355	4729930	3			
2				4			

Verbal Boundary Description
(Describe the boundaries of the property)

The nominated property is a rectangular-shaped parcel measuring approximately 403 ft. by 25 ft. that is centered on the UTM point listed above. Included within this parcel are the bridge's three 121 ft. spans and two 20 ft. approach spans, the superstructure, substructure, and floor system. A sidewalk with a width of 5 ft. extends along the upstream (west) edge. The bridge is centered on the UTM point listed above.

Boundary Justification
(Explain why the boundaries were selected)

The nominated structure includes the bridge's superstructure, substructure, floor system, the two paved approaches with balustrades, and the property on which they rest. These boundaries encompass, but do not exceed, all of the property that has been historically associated with the bridge.

11. Form Prepared By

name/title Marlys A. Svendsen, Svendsen Tyler, Inc.
organization City of Waverly Historic Preservation Commission date 7/2017
street & number N3834 Deep Lake Road telephone 715/469-3300
city or town Waverly state Iowa zip code 50677
e-mail svendsentyler@centurytel.net

Additional Documentation

Submit the following items with the completed form:

- **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. Key all photographs to this map.

- **Continuation Sheets**

- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: Third Street SE Bridge (FHWA No. 012250)

City or Vicinity: Waverly

County: Bremer State: Iowa

Photographer: Sarah Meyer-Reyerson for City of Waverly Historic Preservation Commission

Date Photographed: May 23, 2016

Description of Photograph(s) and number:

1. Third Street SE Bridge (FHWA No. 012250), north & middle spans, looking NW
2. Third Street SE Bridge (FHWA No. 012250), south span, looking WSW
3. Third Street SE Bridge (FHWA No. 012250), north pier, looking WNW
4. Third Street SE Bridge (FHWA No. 012250), south span beneath deck, looking S
5. Third Street SE Bridge (FHWA No. 012250), south span beneath deck, looking N
6. Third Street SE Bridge (FHWA No. 012250), south span, deck & sidewalk detail, looking NE
7. Third Street SE Bridge (FHWA No. 012250), south approach, looking NNE
8. Third Street SE Bridge (FHWA No. 012250), north approach, looking S
9. Third Street SE Bridge (FHWA No. 012250), upstream view of three spans & sidewalk, looking SE
10. Third Street SE Bridge (FHWA No. 012250), bridge nameplate detail, looking S

Property Owner: Complete this item at the request of the SHPO or FPO.)

name City of Waverly, c/o William D. Werger, City Attorney

street & number City Hall, 200 1st St NE telephone 319-352-9210

city or town Waverly state IA zipcode 50677

ended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including 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 Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Sketch Map for Third Street SE Bridge (FHWA No. 12250), Waverly, Iowa (prepared by Ben Kohout, Community Development & Zoning Specialist for the City of Waverly's Zoning Department, July 2017).

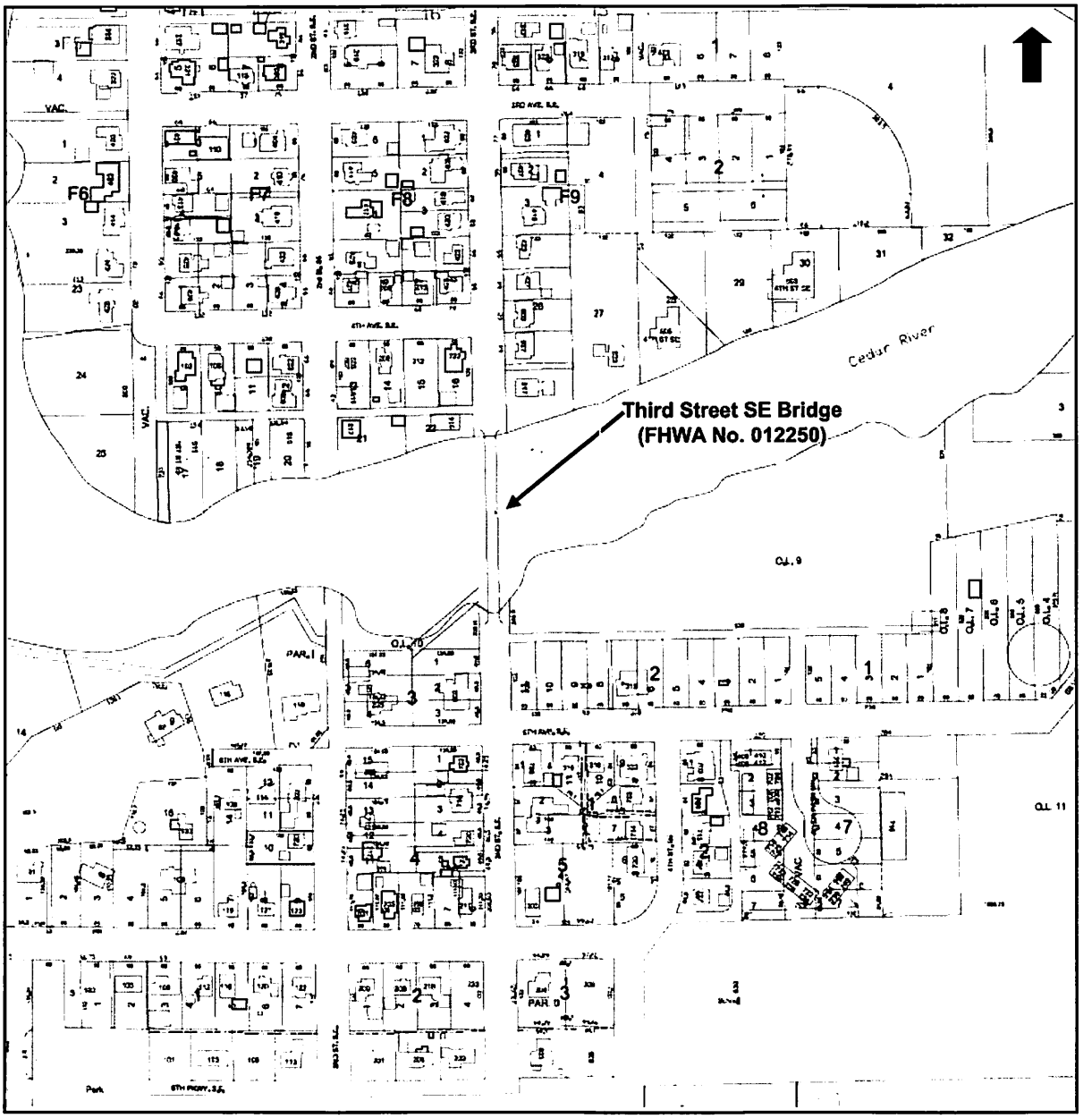


Photo Key for Third Street SE Bridge (FHWA No. 012250) (prepared by Ben Kohout, Community Development & Zoning Specialist for the City of Waverly's Zoning Department, July 2017).

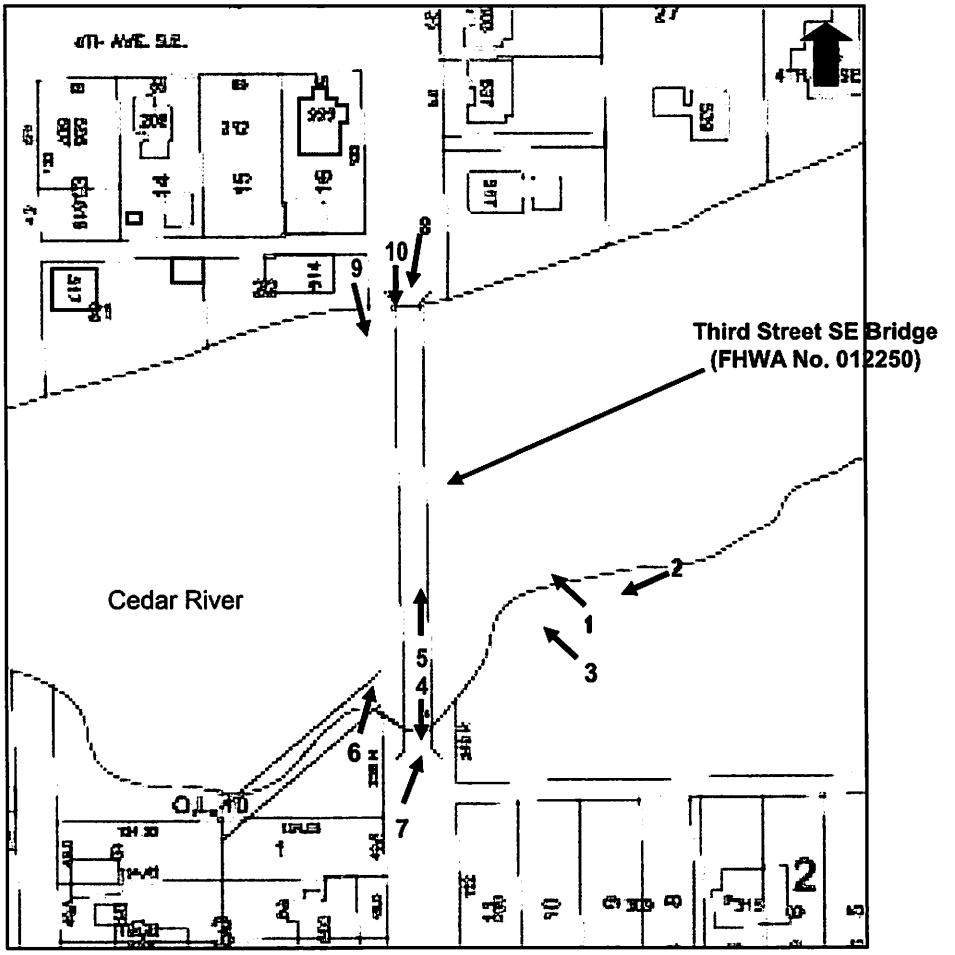


Figure 1: Comparison of Old Fourth Ward SE NRHP Historic District house building and Waverly's Population Growth (Data from Southeast Quadrant Survey research and Federal Census Records, 1870 to 2010); Peak decades for house building and population growth highlighted.

Old Fourth Ward Historic District House Building		
Construction Period	Number of Houses	Percentage of Total
Pre-1880	3	4%
1880-1889	7	9%
1890-1899	17	22%
1900-1909	13	17%
1910-1919	13	17%
1920-1929	9	12%
1930-1939	3	4%
1940-1949	6	7%
1950-1959	6	7%
1960-2012	1	1%
Total	78	100%

Waverly's Population Growth		
Year	Population	Percent +/-
1870	2,291	-
1880	2,345	+2%
1890	2,346	0%
1900	3,177	+35%
1910	3,205	+1%
1920	3,352	+5%
1930	3,652	+9%
1940	4,156	+14%
1950	5,124	+23%
1960	6,357	+24%
1970	7,205	+13%
1980	8,444	+17%
1990	8,539	+1%
2000	8,968	+5%
2010	9,874	+10%

Figure 2: Illinois Steel Bridge Co. bridges in Midwest states shown by form (prepared by Bridgehunter.com, available at https://bridgehunter.com/category/builder/illinois-steel-bridge-co/exhibit; accessed 6/21/2016). The Third Street SE Bridge (FHWA No. 012250), is shown by arrow on exhibit map below.

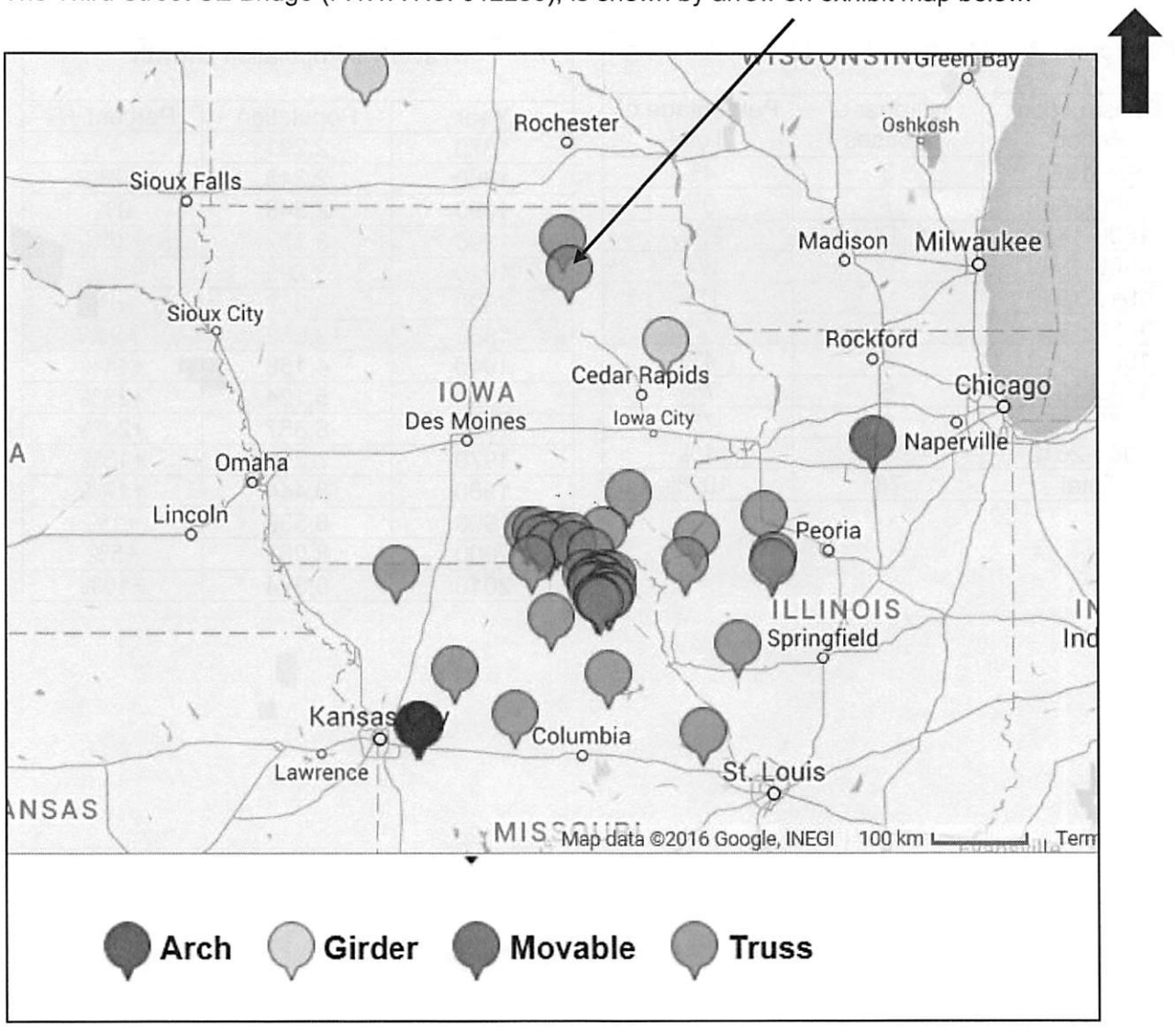


Figure 3-1: County Map for Bremer County (prepared by Iowa Department of Transportation; available online at: https://iowadot.gov/maps/msp/citypdf/BREMER-co.pdf, accessed 8/24/207). Bridge location at arrow in city of Waverly.

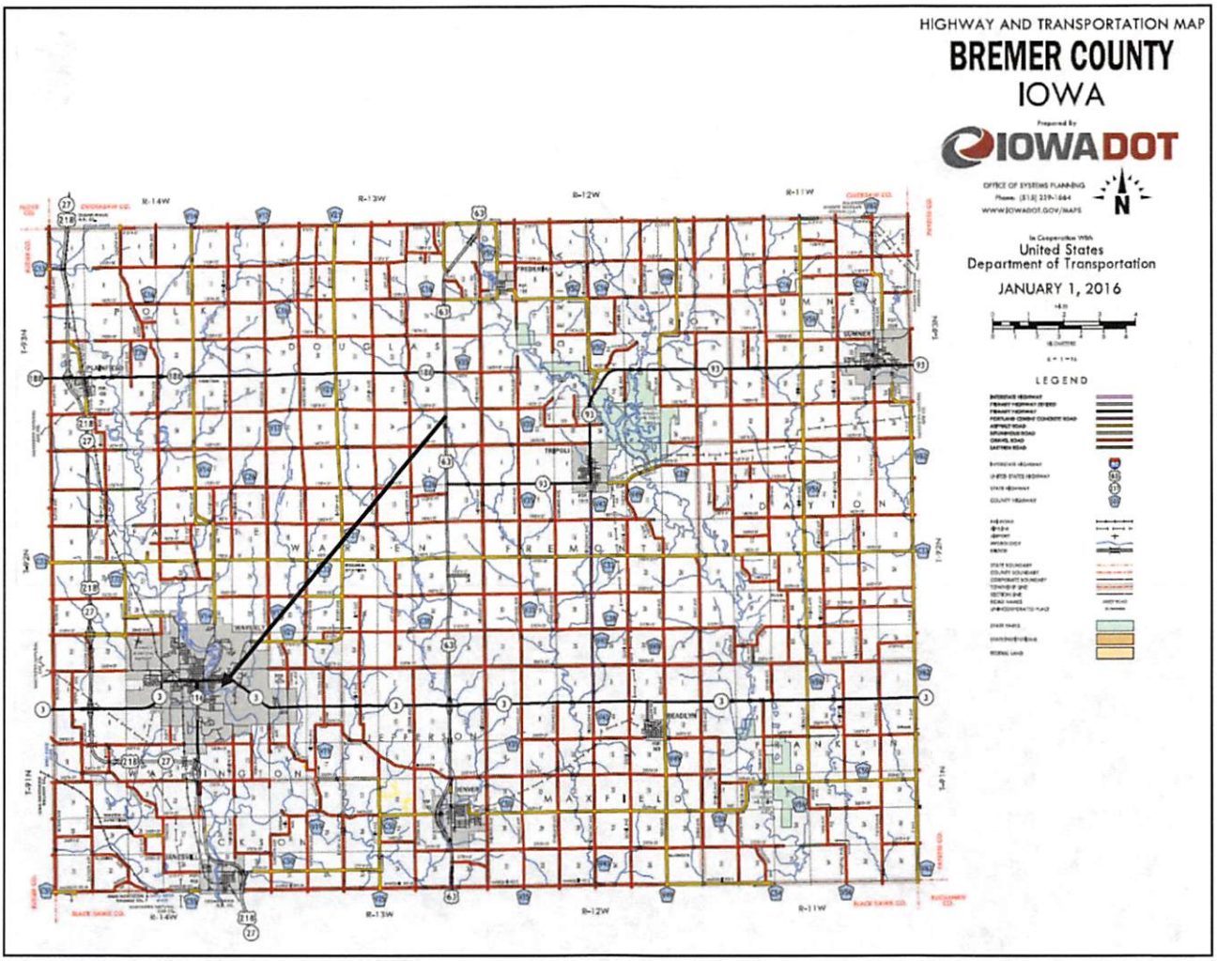


Figure 3-2: Aerial Views of Third Street SE Bridge (FHWA No. 012250) - arrow shows bridge location in southeast Waverly. (Google Maps, available online at: https://www.google.com/maps/@42.7211997,-92.4676694, 634m/data=!3m1!1e3; accessed 6/21/2016 and 5/31/2016).

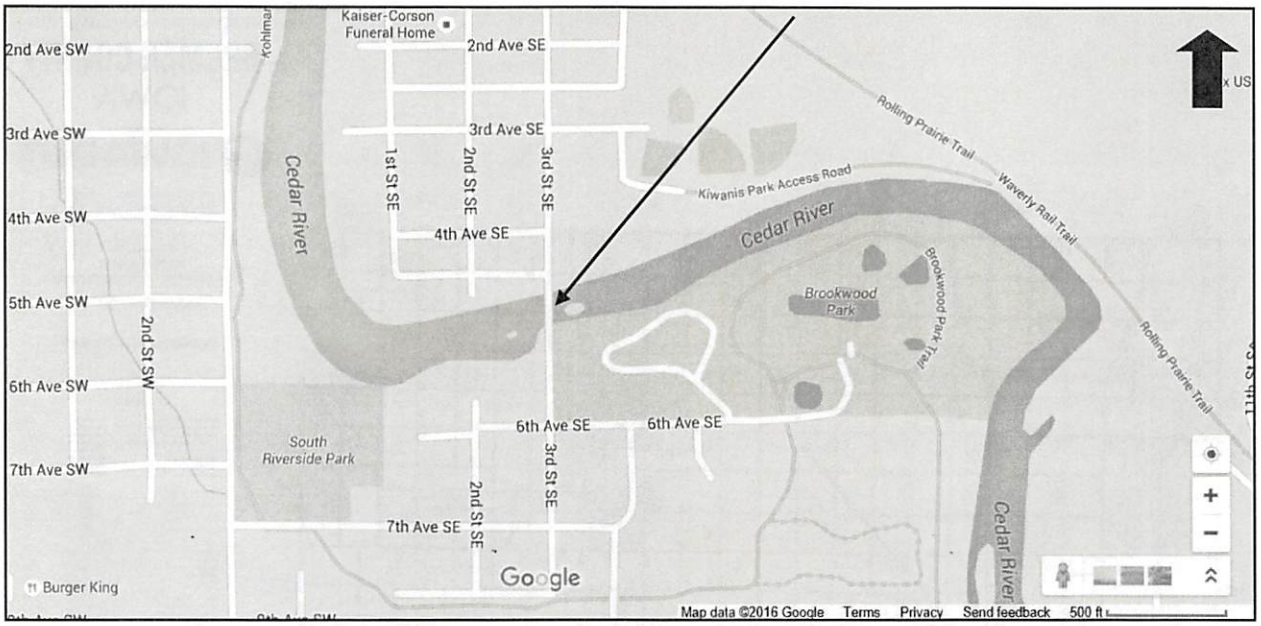


Figure 4-1: Historic Views of Third Street SE Bridge (FHWA No. 012250); "Waverly Public Library Collection," Waverly, Iowa.

April 1, 1933 Flood on Cedar River, looking northeast from south approach to Harmon Street Bridge.

March 7, 1961, Harmon Street Bridge during flooding conditions.

Figure 4-2: Historic Views of Third Street SE Bridge (FHWA No. 012250); "Waverly Public Library Collection," Waverly, Iowa.

February 1971 during bridge repairs by Ramker Construction, looking northeast beneath bridge.

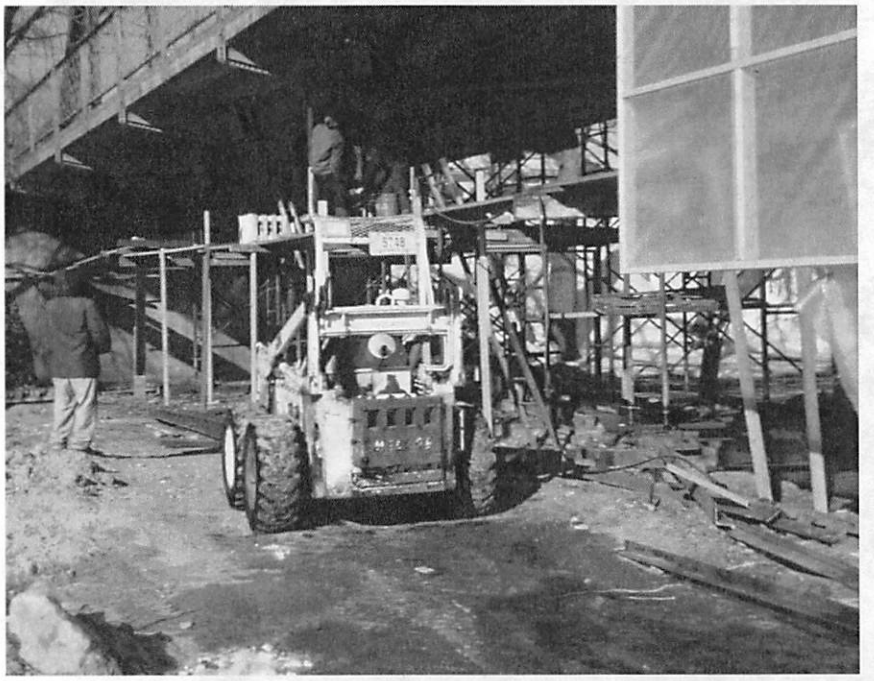


Figure 4-3: Historic Views of Third Street SE Bridge (FHWA No. 012250); "Waverly Public Library Collection," Waverly, Iowa (above); Public Works Department, City of Waverly, June 2016 (below).

Winter 1985 at south sidewalk entrance to bridge approach, looking northeast.

School children gathered for photo ca. 1980s.

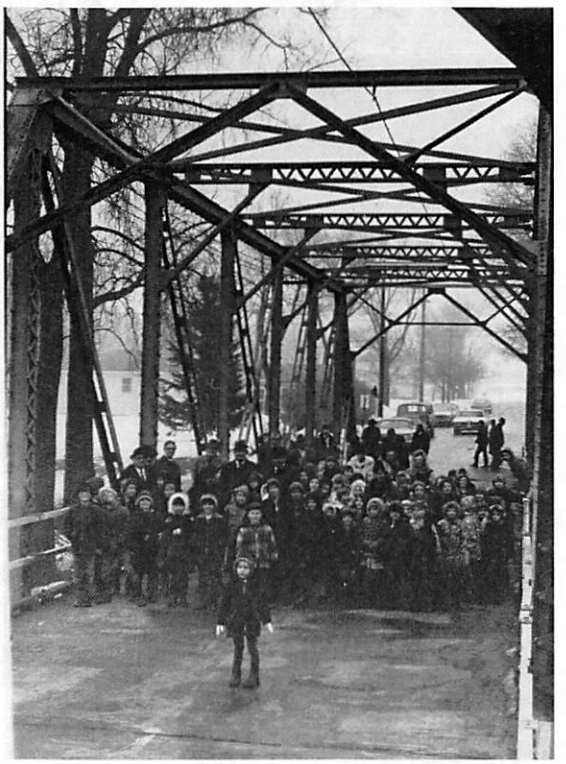


Figure 4-4: Historic Views of Third Street SE Bridge (FHWA No. 012250); "Waverly Public Library Collection," Waverly, Iowa

February 1981 along bridge sidewalk on center span, looking south.

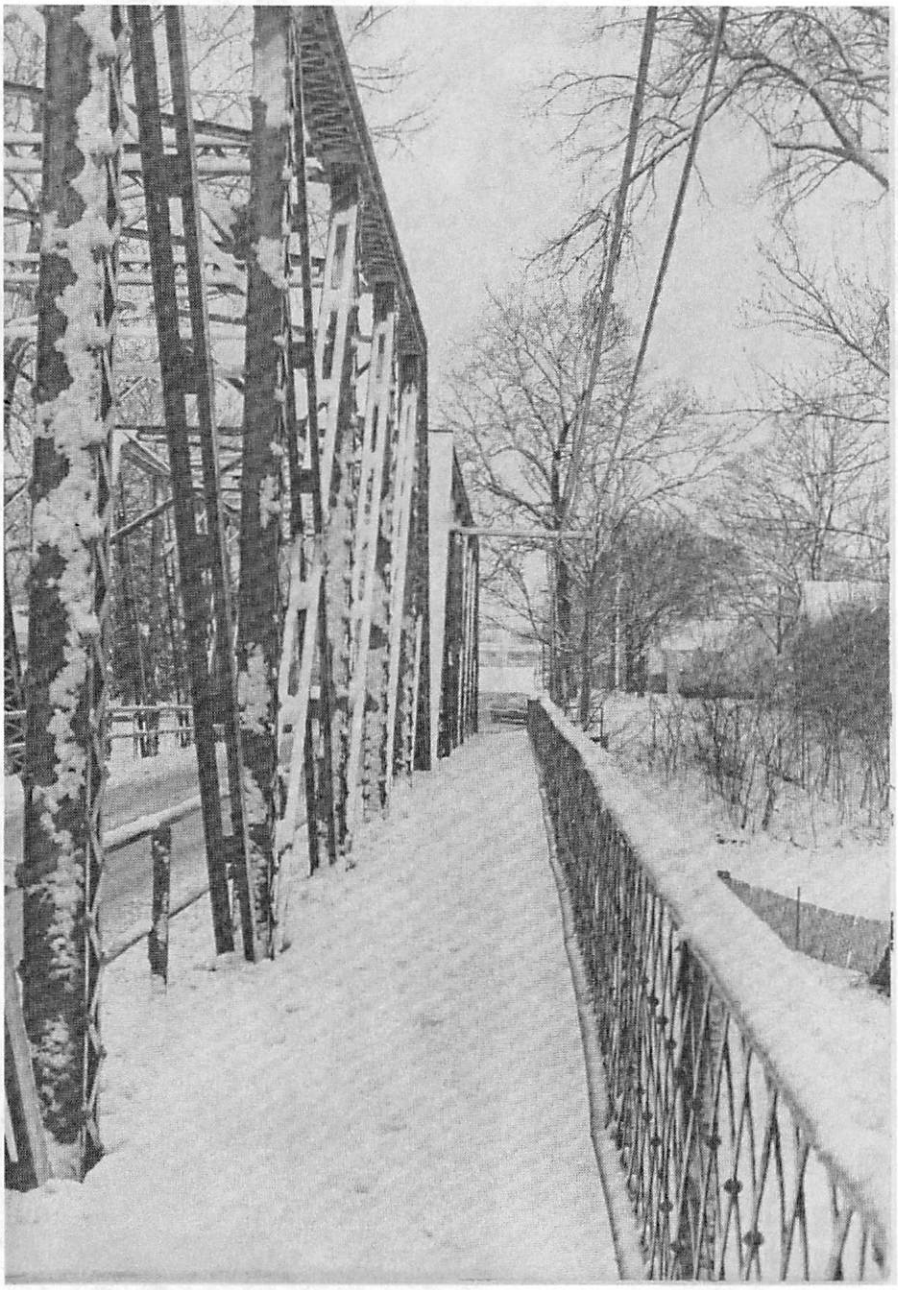
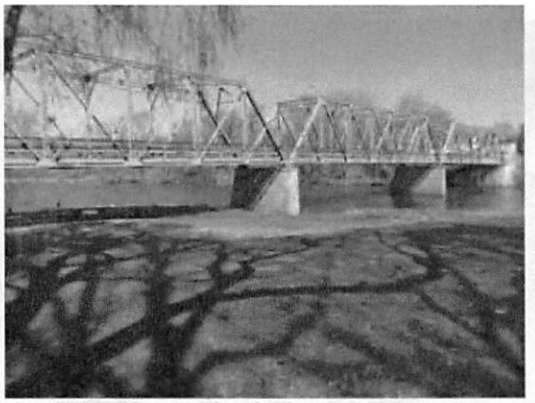
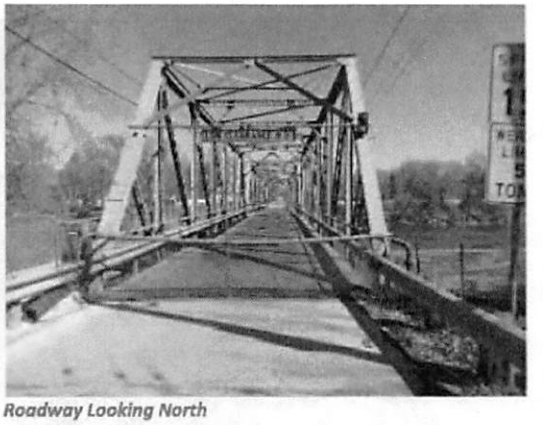


Figure 4-5: Historic View of Third Street SE Bridge (FHWA No. 012250), July 2012; Available online at: https://bridgehunter.com/ia/bremer/12250/; accessed 6/26/2017; photographer - Jack Schmidt, view of three spans from north approach looking south; note balustrade design seen in Figures 6-2 and 6-5.

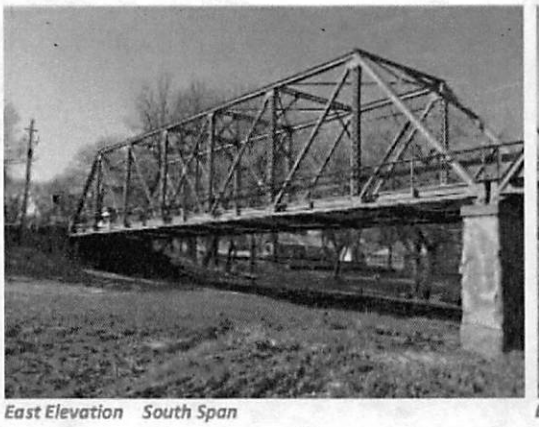
Figure 5: Photographs of Third Street SE Bridge (FHWA No. 012250) from *Final Report Third St SE Bridge Evaluation & Feasibility Study* (July 23, 2015), Public Works Department, City of Waverly, June 2016.



East Elevation from South Embankment

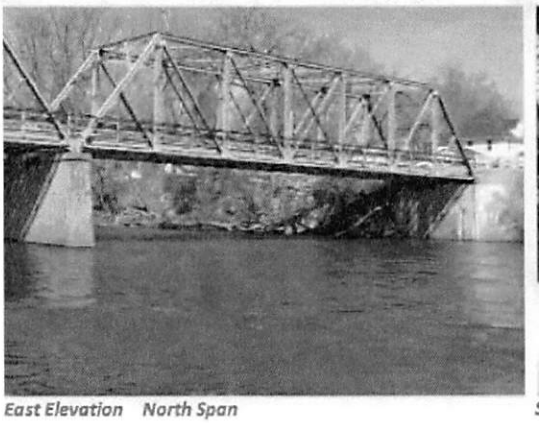


Roadway Looking North



East Elevation South Span

East Elevation Center Span



East Elevation North Span

South Span Floor System Looking North

Figure 6-1: Original 1915-1916 Iowa Highway Commission Bridge Plans, page no. 4, with 1970 updates overlaid (from files of the Public Works Department, City of Waverly, June 2016).

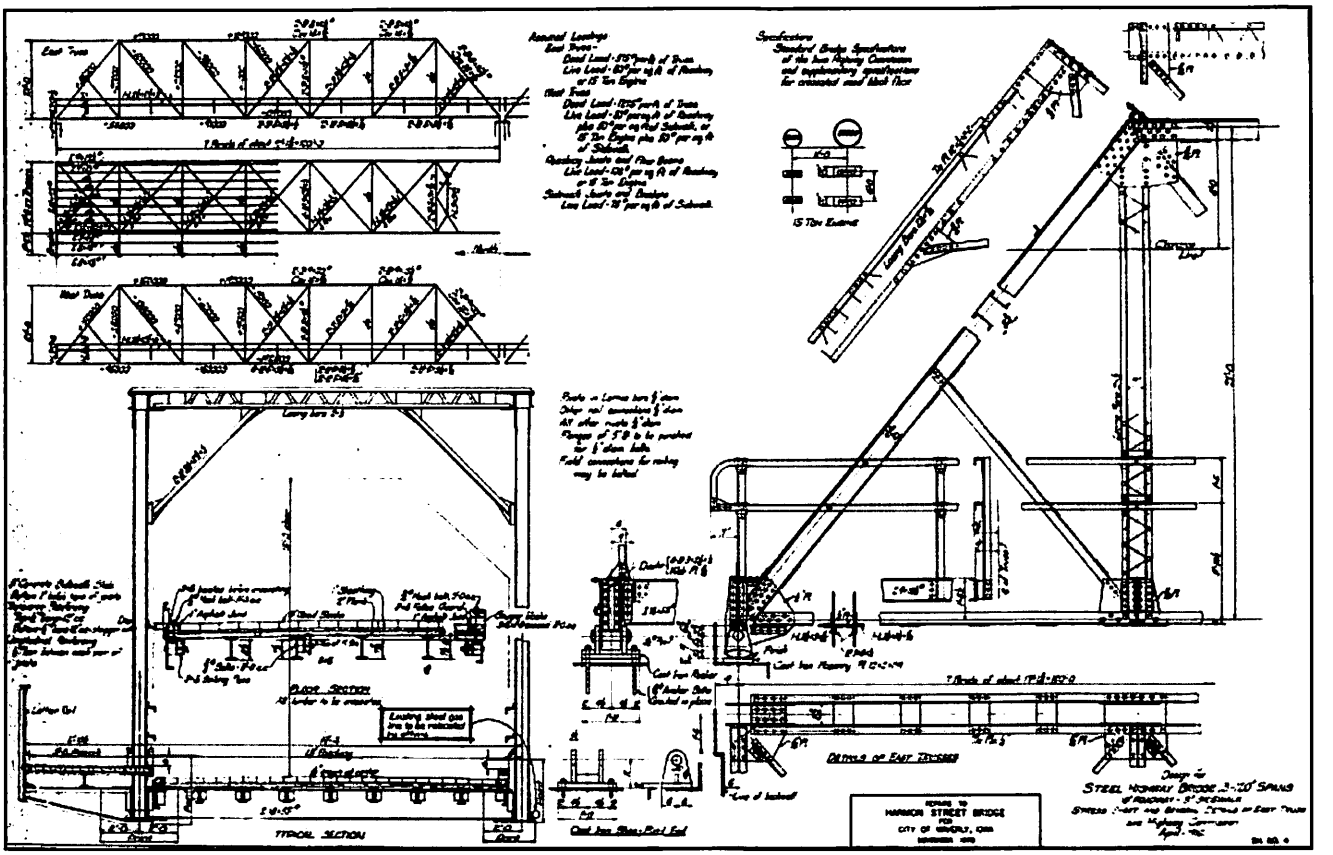
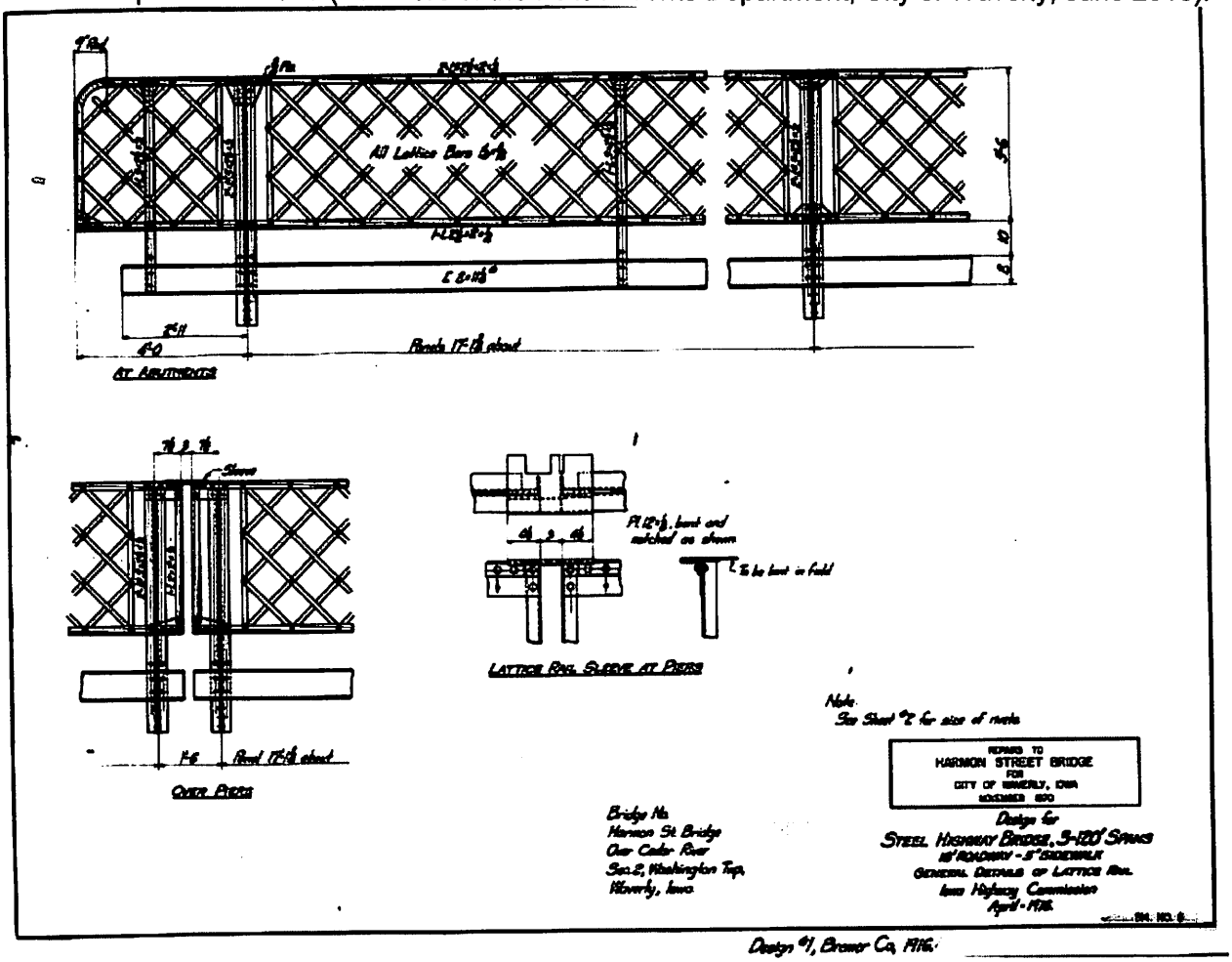


Figure 6-2: Original 1915-1916 Iowa Highway Commission Bridge Plan for Design #1 Lattice Rail, April 1916 with 1970 updates overlaid (from files of the Public Works Department, City of Waverly, June 2016).



Detail of design credit

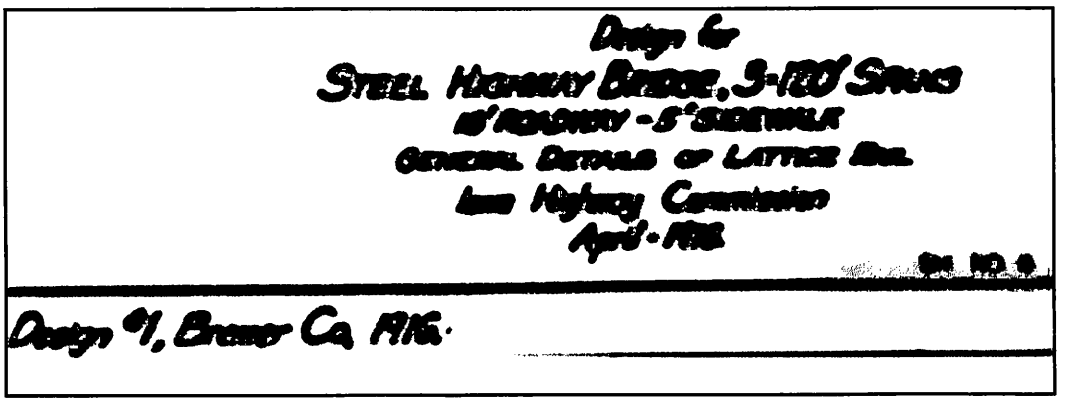


Figure 6-3: Original July 1917 Illinois Steel Bridge Company Plan, selected shop drawing based on 1915-16 Iowa Highway Commission Bridge Plan with 1970 updates overlaid (from files of the Public Works Department, City of Waverly, June 2016).

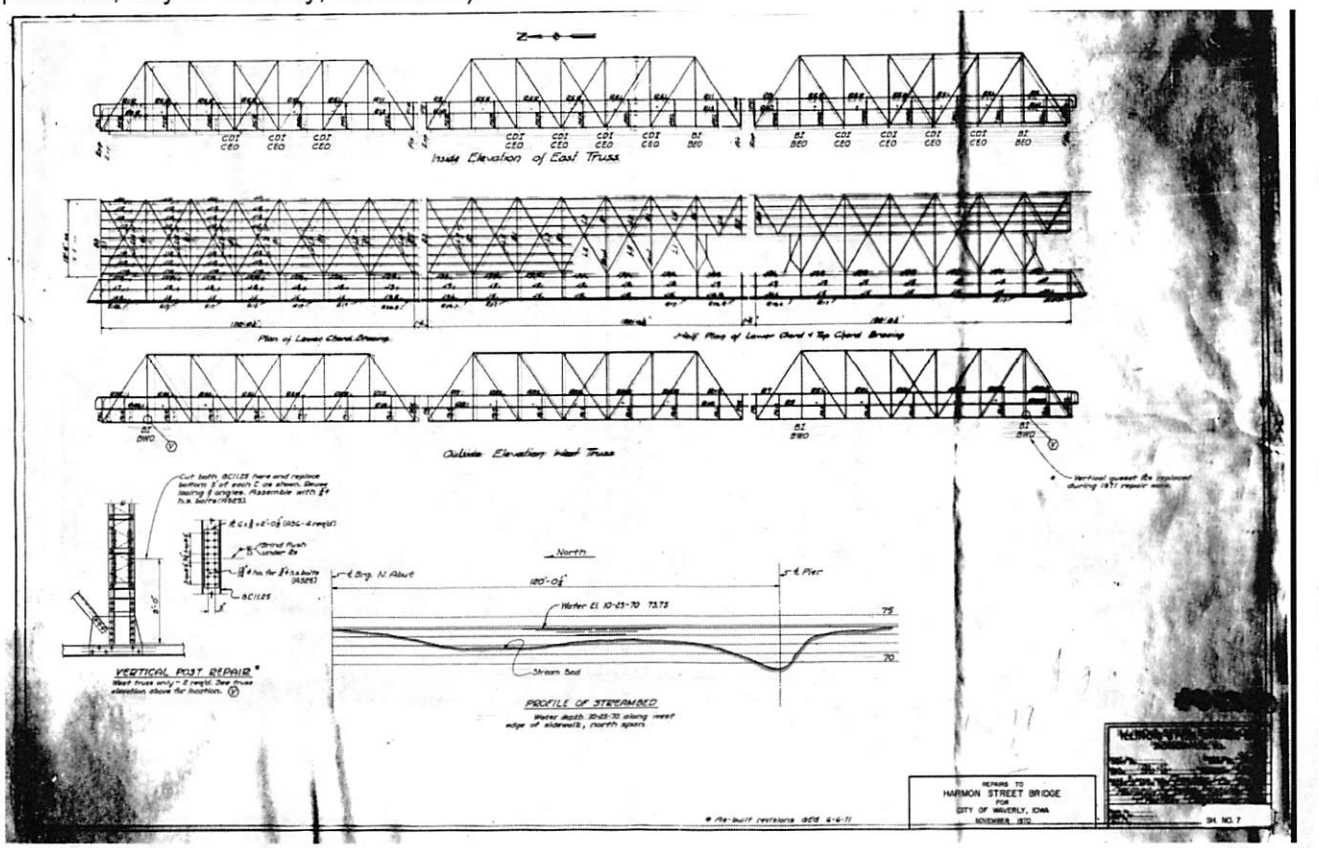


Figure 6-4: Original July 1917 Illinois Steel Bridge Company, selected shop drawing based on 1915-16 Iowa Highway Commission Bridge Plan with 1970 updates overlaid (from files of Public Works Department, City of Waverly, June 2016).

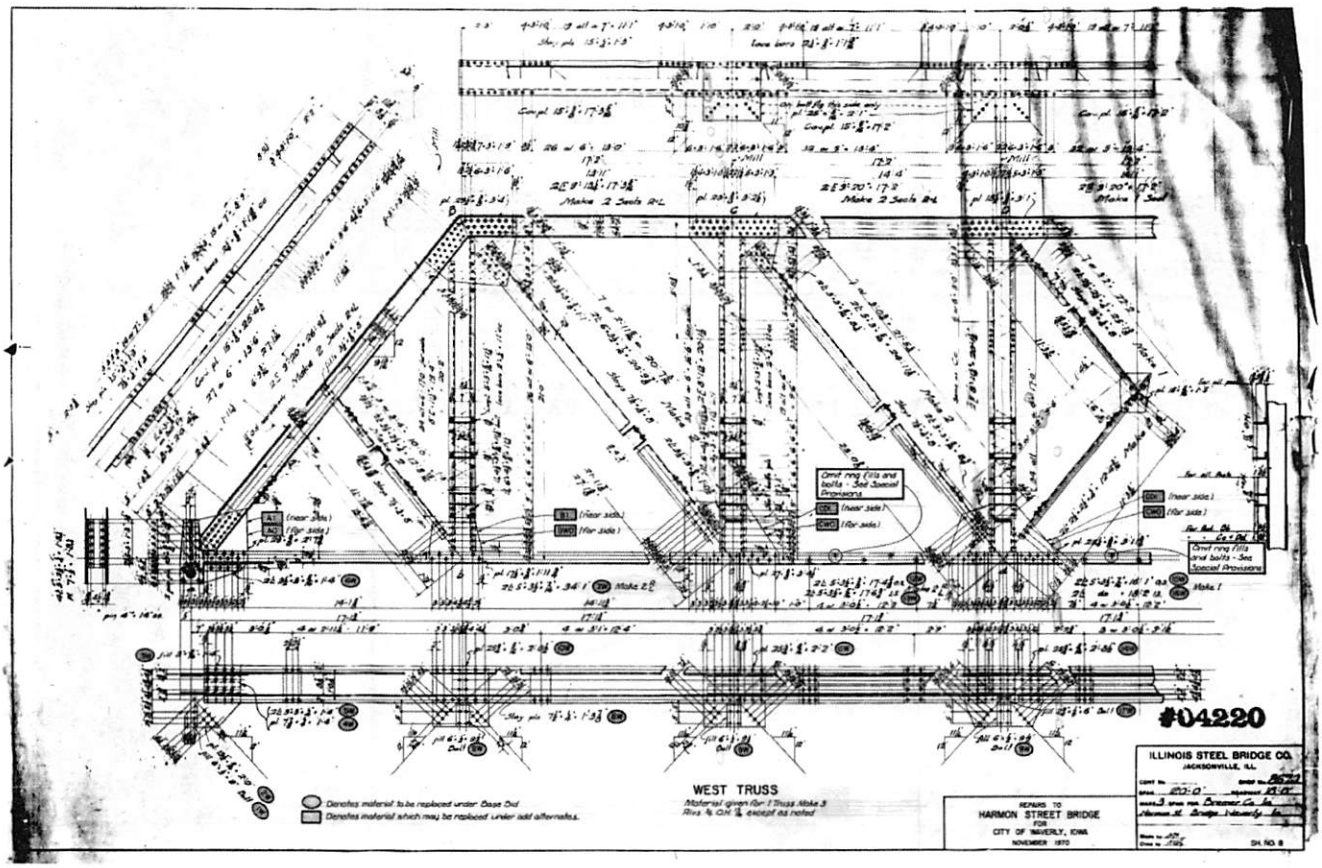


Figure 6-5: Original July 1917 Illinois Steel Bridge Company, selected shop drawing based on Iowa Highway Commission Bridge Plan 1915-16 with 1970 updates overlaid (from files of Public Works Department, City of Waverly, June 2016).

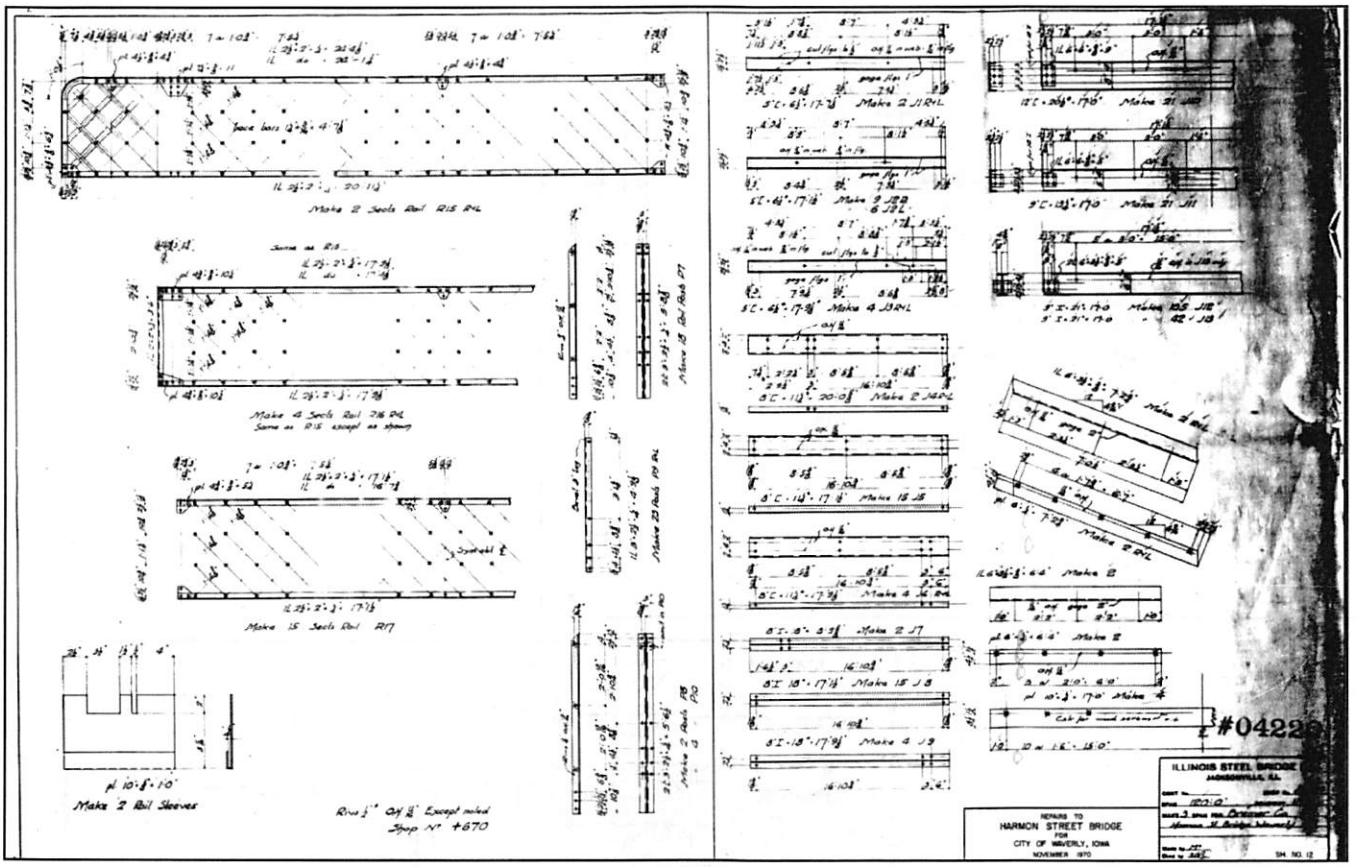
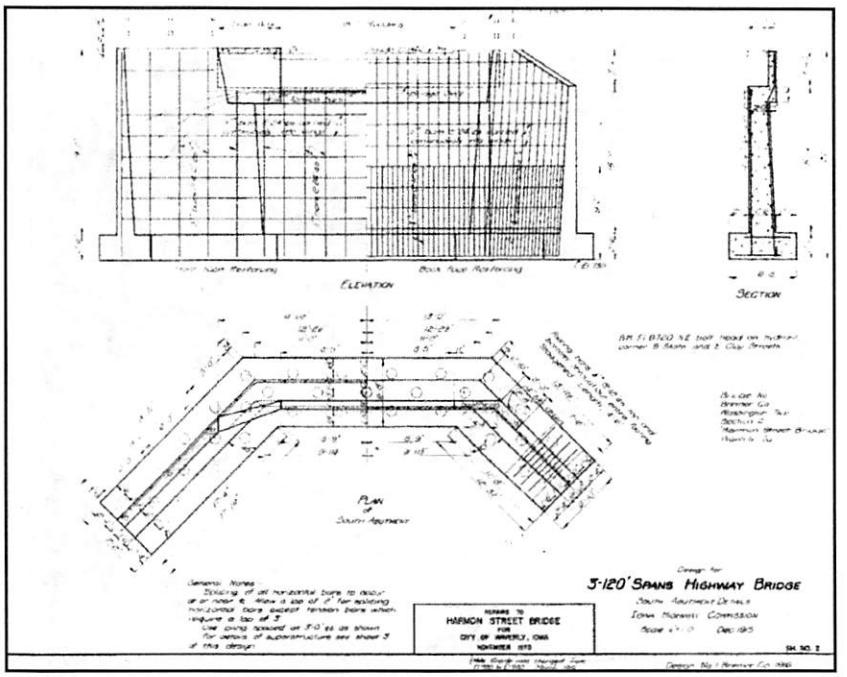


Figure 6-6: Original July 1917 Illinois Steel Bridge Company shop drawings (pages 1 and 2) for piers and abutments based on 1915-16 Iowa Highway Commission Bridge Plan with 1970 updates overlaid (from files of Public Works Department, City of Waverly, June 2016).



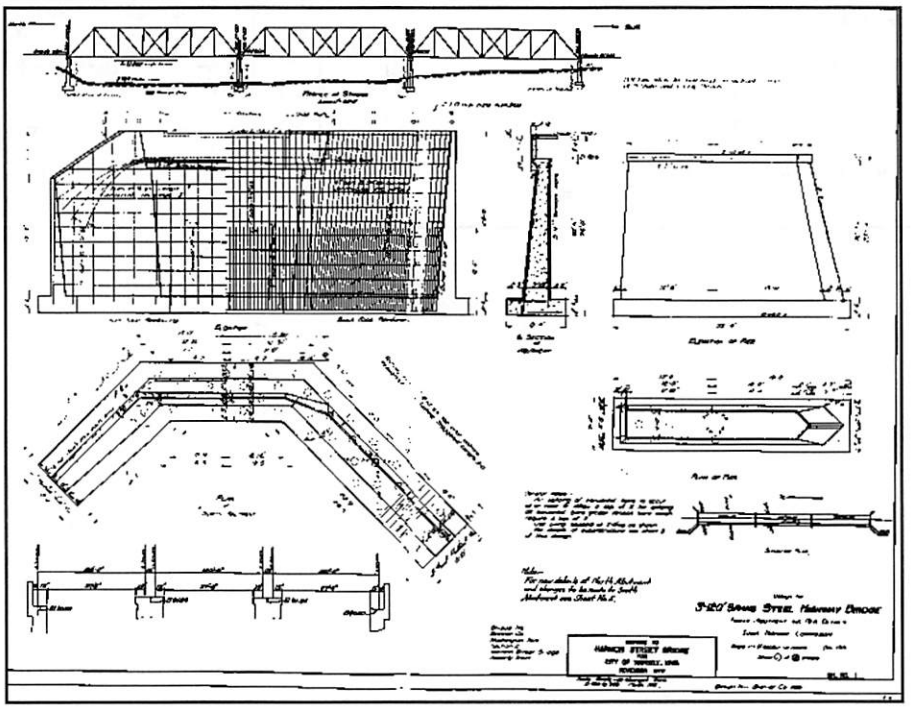
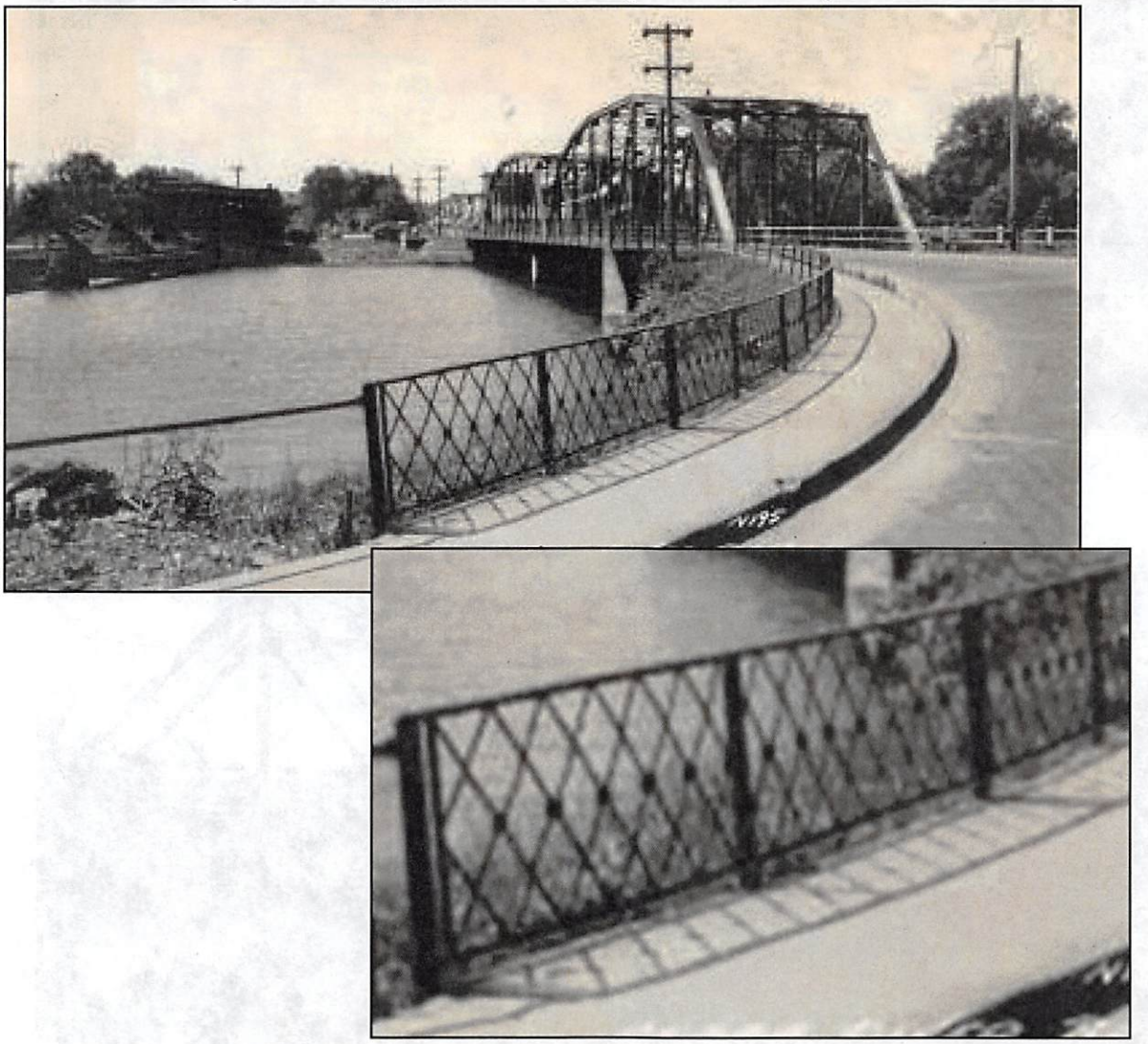
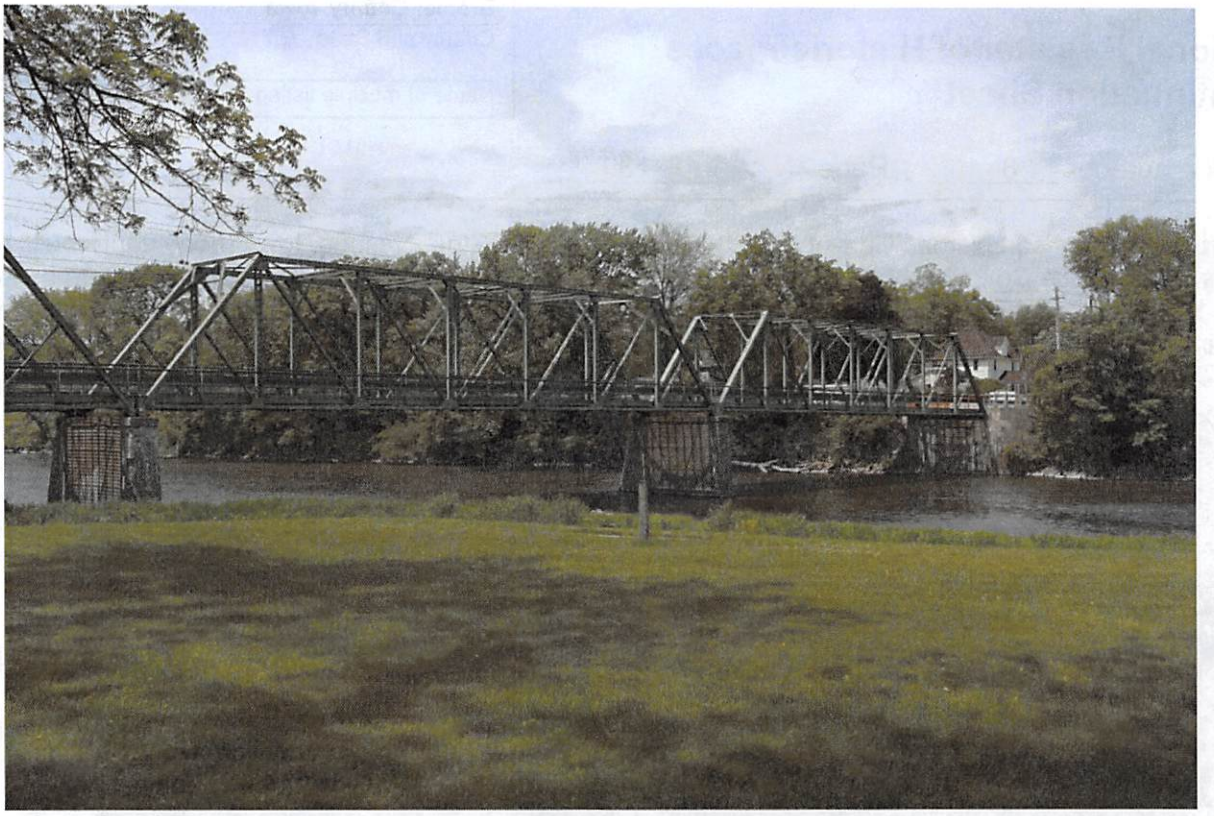
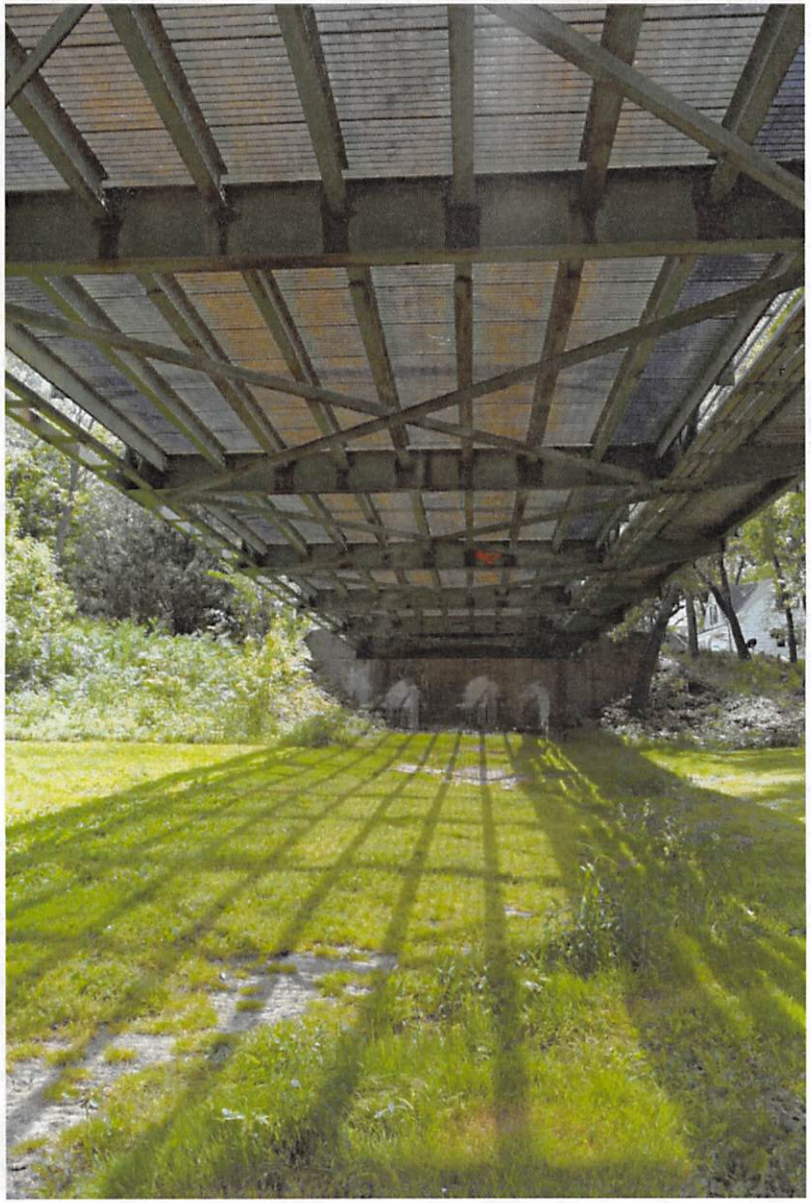


Figure 7: Comparison historic view of Iowa 346, Cedar River Bridge, Nashua, Iowa (nonextant); built 1921 by Illinois Steel Bridge Co., similar details to Third Street SE Bridge, Waverly also based on a design by Iowa State Highway Commission. Note the similarity of the sidewalk balustrade enlargement below that is identical to Third Street SE Bridge in Waverly; see plan design Figs. 6-2 and 6-5. (Photo source: Bridgehunters/com).

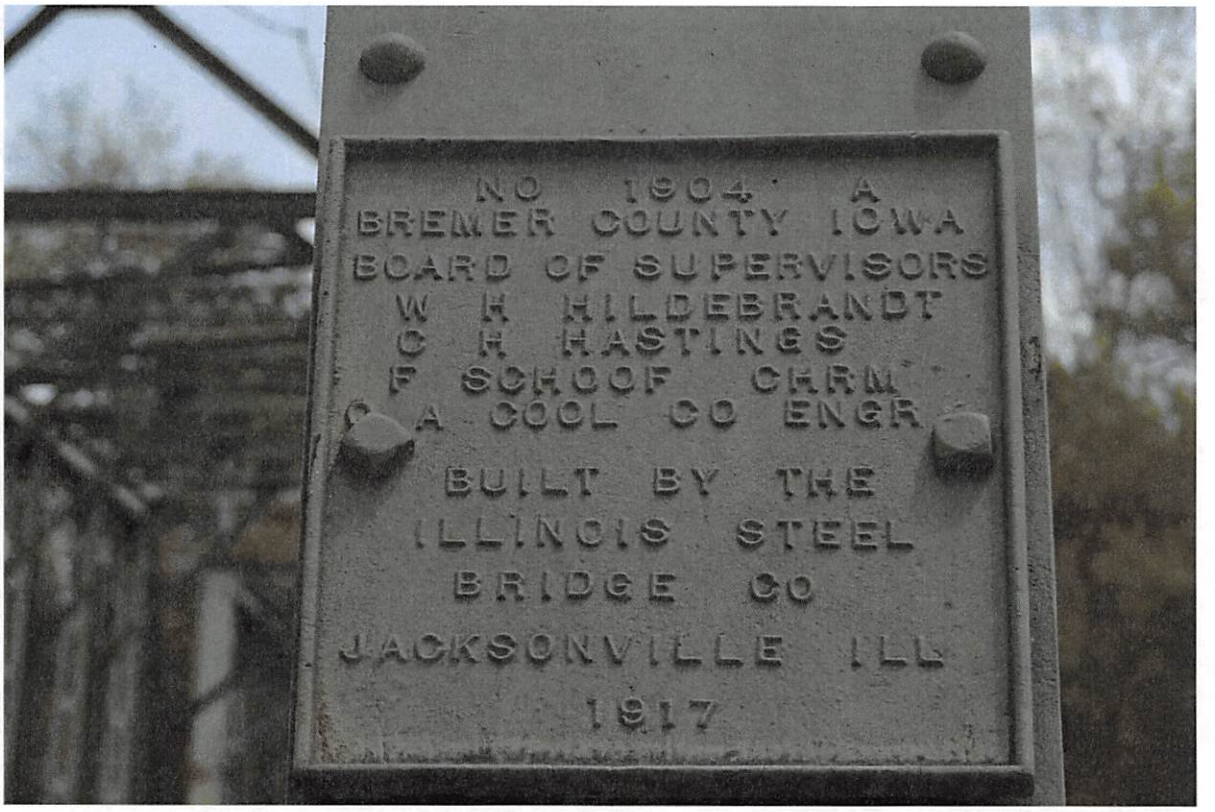







LOW CLEARANCE 8'0"


LOW CLEARANCE 8'0"
SPEED LIMIT 15
BRIDGE CLOSED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