

CANTIGNY WOODS FOOTBRIDGE
(Bridge JTR4B)
Spanning Jackson Creek
Joliet Training Area
Elwood
Will County
Illinois

HAER No. IL-1210

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
Department of Interior Regions 3, 4, 5
601 Riverfront Drive
Omaha, Nebraska 68102

HISTORIC AMERICAN ENGINEERING RECORD

CANTIGNY WOODS FOOTBRIDGE (Bridge JTR4B)

HAER No. IL-1210

Location: Elwood, Illinois

The Cantigny Woods Footbridge crosses Jackson Creek within Training Area 4 of the Joliet U.S. Army Reserve Center (USARC)/Joliet Training Area (JTA), a 3,585-acre Army training facility located approximately ten miles south of Joliet, Illinois and 1.5 miles northwest of Elwood, Illinois. United States Geological Survey. *Channahon, IL*. 2021. NGA Reference No. USGSX24K8138. World Geodetic System 1984 Latitude 41.418681 Longitude -88.132548.

**Present Owner/
Occupant:** United States Army Reserve.

Present Use: The footbridge, originally designed for pedestrian use but later used for vehicles by the Army, has been abandoned in place for an extended period in a heavily wooded area along Jackson Creek and is only accessible from the creek's north bank.

Significance: The Cantigny Woods Footbridge, originally constructed as a part of the former Forest Preserve District of Will County, is significant for its association with Civilian Conservation Corps (CCC) era (1933-1942) construction in Illinois and for its engineering design as a distinctive example of CCC concrete arch footbridge construction in the northern Illinois region.

Historian: Joseph Scott Murphey, Historical Architect, U.S. Army Corps of Engineers (USACE) Regional Planning and Environmental Center, Fort Worth, Texas.

**Project
Information:** This documentation serves as mitigation for the loss of the Army Reserve designated JTR4B Bridge (referred to in this document by its historic name, the Cantigny Woods Footbridge), the result of a 2022 Memorandum of Agreement between the U.S. Army Reserve and the Illinois State Historic Preservation Office. The footbridge, located in an isolated area, was considered an attractive nuisance and a safety hazard by the Army due to its deteriorated condition and was slated for demolition. The documentation was compiled by the USACE Regional Planning and Environmental Center in 2023.

Part I. Historical Information

A. Physical History:

1. **Date(s) of construction:** Summer 1939.
2. **Architect/Engineer:** National Park Service.
3. **Builder/Contractor/Supplier:** The 630th Company of the Civilian Conservation Corps Camp Brandon-Morris, Morris, Illinois.
4. **Original plans and construction:** No known original construction documents are extant.
5. **Alterations and additions:** The footbridge railings were removed from the abandoned footbridge at an unknown date. Approximately 15' of the wooden deck is missing at the south bank abutment. Additional running boards were added to the footbridge deck to facilitate vehicle crossings at an unknown date.

B. Historical Context:

The Cantigny Woods Footbridge crosses Jackson Creek within Joliet USARC Joint Training Area (JTA) Four, ten miles south of Joliet, Illinois. The Joliet JTA is the one of the largest local Army Reserve training areas in the continental United States.

Joliet Army Ammunition Plant and the Joint Training Area

Joliet Army Ammunition Plant was one of seventy-seven similar ammunitions plants built during World War II to produce ammunition and explosives for the U.S. military. The War Department purchased fifty-seven square miles of farmland in Will County in 1940 (that included the Cantigny Woods Footbridge) to build the Elwood Ordnance Plant and the Kankakee Ordnance Works along with open land for training, which combined to first become the Joliet Arsenal and ultimately the Joliet Army Ammunition Plant. At the time they were built, the Joliet plants were considered the largest, most sophisticated munitions plants in the world.¹ The installation was closed in the early 1990s as part of an Army-wide restructuring at the end of the Cold War known as Base Realignment and Closure (BRAC). The Army continued to use portions of the land for training.

The JTA was established in 1962 when 4,250 acres of the Joliet Army Ammunition Plant was transferred to Fort Sheridan for the purpose of establishing a training area for troops stationed in the local and the greater Chicago region. The JTA remained under the control of Fort Sheridan until 1990 when Fort Sheridan entered BRAC and the JTA was transferred to Fort McCoy. The JTA was under the control of Fort McCoy until 2009 when the LTA was transferred to the 88th Regional Support Command which became the 88th Readiness Division in 2019.

In 1993, 23,500 acres of Joliet Army Ammunition Plant land was declared to be excess under BRAC.

¹ Historic American Engineering Record (HAER), National Park Service, U.S. Department of the Interior. Joliet Army Ammunition Plant. HAER No. IL-18. Page 5.

Redevelopment plans included around 3,000 acres for two industrial parks, four-hundred-fifty-five acres for the Will County Landfill, nine-hundred-eighty-two acres for the Abraham Lincoln National Cemetery, and most of the former plant, 19,000 acres, became the Midewin National Tallgrass Prairie.² The portion of the former ammunition plant that contained the Cantigny Woods Footbridge remained under the control of JTA.

The Forest Preserve of Will County and the Cantigny Woods

The 1920 Will County Platt Book shows the property belonging to an M. J. Breen as part of a 98.62-acre tract of land. Breen sold the land to the Forest Preserve District of Will County created by referendum on July 25, 1927, to preserve open spaces in the county in 1930. The Breen property was part of its first land acquisition.³

The Forest Preserve District named the area Cantigny Woods, after a small village in France, where the U.S. Army's First Division fought in May 1918. The Battle of Cantigny was America's first victory in World War I. Robert McCormick, publisher of the Chicago Tribune Consequently, after the war, the name Cantigny was used repeatedly in the Chicago Area, with similar named woods in adjacent Cook County and most famously, Cantigny Park in Wheaton, Illinois. Naming forest preserve areas after World War I battles was a common practice at the time in the area.

The Will County Forest Preserve District sought the assistance of the National Park Service and the CCC to make improvements on the land for recreational purposes. The Cantigny Woods Footbridge was constructed over Jackson Creek, a tributary to the Des Plaines River, in the summer of 1939 by the 630th Camp Brandon-Morris Company of the CCC, Morris, Illinois. A fireplace shelter was constructed near the north bank of the footbridge and a picnic shelter a few hundred yards beyond the bridge on the south bank of Jackson Creek. Camp Brandon-Morris was one of approximately fifty CCC camps in Illinois, comprised of around two-hundred men.⁴ The 630th Co. CCC work detail was led by foreman Irwin Ruben Ahlvin (1902-1975) of Joliet, Illinois and assisted by crew leader Mr. Widitz.

The Cantigny Footbridge Featured in CCC Camp Newspaper

Tow-Path Topics, the monthly typewritten CCC company newsletter of the 630th Camp Brandon Morris Company, featured an article dedicated to the bridge and its construction in the August 1939 edition⁵. It noted that each of the reinforced concrete arches weighed four tons. The arches were fabricated onsite on the creekbank and then jacked up and set into position by the 630th Co. work detail under the direction of the foreman, Mr. Ahlvin.

The article stated the arches originally had a decorative finish. The plywood forms were burned and then brushed with a steel brush to enhance the texture of the wood, leaving the imprint of the forms in the finished concrete. The concrete was then painted to visually enhance the wood grain impressions in the

² United States Army Reserve 88th Readiness Division Files. *Historic Building Management Plan for the Joliet United States Army Reserve Center (USARC)/ Joliet Training Area (JTA) Bridge (JTR4B)*.

³ Platt Book of Will County Illinois, 1920 and 1940. Page 30.

⁴ McDonald, Jerry. *The Story of the CCC and its Legacy in Illinois*. Illinois Country Living. January 2018.

⁵ *Tow Path Topics – Brandon-Morris Bulletin - 630th Co. CCC*. August 1939. Civilian Conservation Corps newsletter. Page 5.

concrete, noting that the finish closely resembled varnished plywood.

The Cantigny Woods Footbridge During Army Ownership, 1941-2024

The Forest Preserve District land containing the footbridge was taken by the U.S. Army in January 1941 as part of the land acquisition for the ordnance plants. The district was paid fair land market price by the Army. The footbridge went largely unused during the Army's occupation of the land in 1940 through its planned demolition in 2024, however the Army modified the bridge for vehicle traffic at an unknown date. The bridge, not designed for the additional loading of vehicles, shows cracks and deterioration on the reinforced concrete arches at the time of documentation.

Part II. Structural/Design Information

A. General Statement:

Character: The Cantigny Bridge is a single-span, two-hinge ring-arch bridge with reinforced concrete arch ribs and beams, a wood plank deck hung from iron hangars, masonry-jacketed concrete abutments, and integrated masonry approach structures flanked by low masonry walls (Figures 2-6).

Condition of fabric: The abandoned bridge is in good condition considering it has not been in active use for decades. The original wood railings were removed at an unknown date, likely due to deterioration. Approximately fifteen feet of the wooden bridge deck on the south side was removed at an unknown date to discourage unauthorized use. Concrete has spalled at the crown of the west arch exposing rebar. Cracking was likely due to exceeding the design load of a pedestrian bridge with vehicles. Approximately five percent of the masonry on the north and south abutments is missing. Additional damage includes spalled and deteriorated masonry near the water level and deteriorated mortar throughout both approach structures and abutments.

B. Description:

Materials: The bridge is composed of reinforced concrete arch ribs and beams, a wood plank deck of creosoted fir hung from iron hangars, masonry-jacketed concrete abutments, and integrated masonry approach structures flanked by low masonry walls (Figure 3).

General Layout:

The Approaches

The north and south approaches to the bridge consist of irregular flagstone pavements (currently buried under a thin soil layer) flanked by low, sloping, uncoursed ashlar masonry walls composed of Joliet Limestone (Figures 3 and 4). Each of the four masonry walls are structurally integrated into its abutment and has a concrete core, with a single reinforcing bar protruding from top of the wall near the edge of the wood plank deck. These bars served as anchors for the bridge's railings. The rustic style of the approaches is characteristic of CCC-era masonry structures and are a historically significant feature of bridge's design. A nearly identical configuration of masonry approach structure, flagstone pavement, and railing attachment

system can be seen in the footbridge in DuPage County Forest Reserve Pioneer Park Bridge in nearby Naperville, Illinois.⁶

Both north and south approach structures are missing masonry. The north approach west wall is missing approximately 25 percent of the original stonework and the east wall approximately 10 percent of the stonework along the interior top edge. The west wall of the south approach is missing several stones at the end nearest the arch and approximately 10 percent of the stonework at the wall's south end. The east wall is missing approximately 10 percent of the stonework along the interior edge. The flagstone pavements on the approaches are completely covered with a thick layer of topsoil. The mortar on both approach structures shows extensive deterioration.

Concrete Arches

The structure's segmental arch profile is very shallow, rising a mere 3' over its 61'-6" in effective span. The arch extrados, upon which the deck's wood planks lie, measures 65' between the abutment faces. The two arch ribs are rectangular in cross-section, each measuring 16" wide x 29" deep at the abutment and 16" wide by approximately 18" deep at the arch crown. They are reinforced with cold twisted steel bars, some of which have been exposed by concrete cracking and spalling on the exterior face and underside of the arch crown. The terminal ends of both ribs are unusual circular bearings (hinges) oriented in line with the arch axis. Each circular bearing rests in a concrete seat that facilitates the movement of the hinge. There has been some limited spalling and cracking at the crown of both arch ribs, likely due to overloading the bridge with light vehicle traffic.

Abutments

The bridge's abutments are a common "U" form and are constructed of uncoursed ashlar Joliet-Lemont limestone masonry over a concrete core that rests on concrete footings (Figures 3, 4 and 6). The abutment measures 15'-3" in wide at the base, 12'-11" in at the deck level and rises 7'-6" above the concrete footing. All walls are battered, with the top surfaces of the masonry sloping back to meet with the approach structures. Like the approach structures, the rustic style of the abutments is characteristic of CCC-era properties and should be considered a historically significant feature of bridge's design.

Site Information: Most of the installation consists of undeveloped land used for Army training. The portion of Jackson Creek where the bridge is located remains in an undeveloped state, very similar to that at the time of the bridge's construction (Figure 1). The bridge is accessed from the north via a seldom used unpaved road off Arsenal Road that becomes impassible due to vegetation before it reaches the bridge. There is no access from the south due to heavy vegetation.

⁶ Kappel, Michael. Naperville Trail Bridge Photo.

Part III. Sources of Information

A. Primary Sources:

National Park Service, U.S. Department of the Interior.

----- *Joliet Army Ammunition Plant*. HAER No. IL-18. Historic American Engineering Survey.

----- *Tow Path Topics – Brandon-Morris Bulletin - 630th Co. CCC*. August 1939. Civilian Conservation Corps newsletter. Accessed October 1, 2023, <https://dds.crl.edu/crldelivery/21461>.

United States Army 88th Readiness Division Files. *Historic Building Management Plan for the Joliet United States Army Reserve Center (USARC)/ Joliet Training Area (JTA) Bridge (JTR4B) 20612 Arsenal Road, Will County, Elwood, Illinois, 60421-6012 (IL079/17896)*. Mobile District, U.S. Army Corps of Engineers Master Contract No. W91278-07-D-0111 Task Order No. 0051.

United States Geological Survey. *Channahon, IL*. 2021. NGA Reference No. USGSX24K8138.

Will County, Illinois. Platt Book. 1920 and 1940. Accessed November 1, 2023, <https://www.ilsos.gov/departments/library/maps/pdfs/landownership.pdf>

B. Secondary Sources:

Kappel, Michael. *Naperville Trail Bridge*. Flickr. Accessed November 1, 2023, <http://www.flickr.com/photos/m-i-k-e/2519816590/>.

McDonald, Jerry. *The Story of the CCC and its Legacy in Illinois*. Illinois Country Living. January 2018. Accessed October 1, 2023, <https://icl.coop/issues/january-2018/>.

Part IV. Appendix

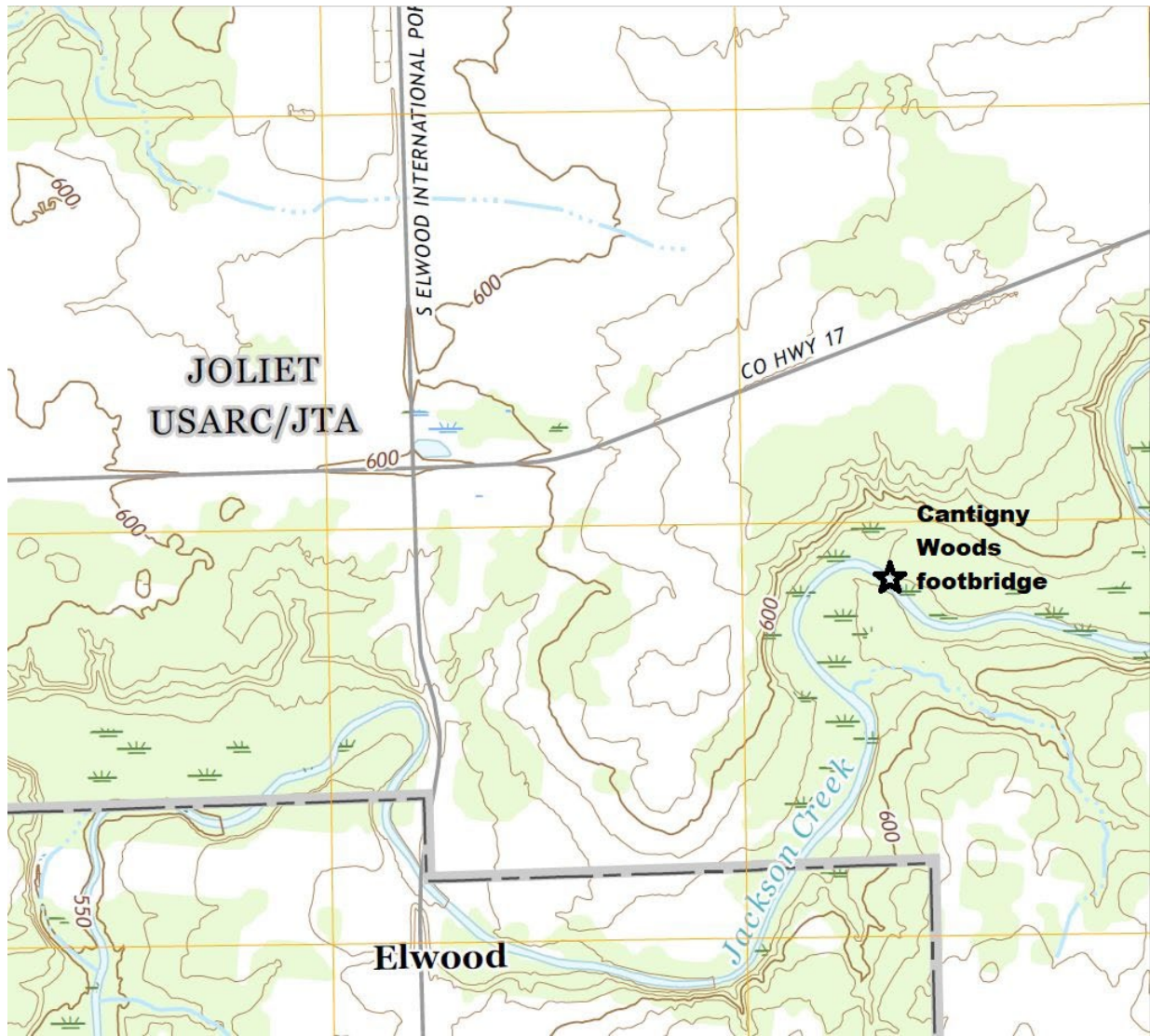


Figure 1. Cantigny Woods Footbridge location. Source: United States Geological Survey. *Channahon, IL*. 2017. NGA Reference No. USGSX24K8138.



Figure 2. Approach view of the footbridge looking south from the north bank of Jackson Creek. Photograph by Joseph S. Murphey, USACE.



Figure 3. View looking south from the north bank of Jackson Creek on the west side of the footbridge. Photograph by Joseph S. Murphey, USACE.



Figure 4. Detail view of the west side of the north abutment. Photograph by Joseph S. Murphey, USACE.



Figure 5. Detail view looking northeast from the southside of the footbridge showing missing bridge deck that exposes the concrete structural system and the iron joist hanger. Photograph by Joseph S. Murphey, USACE.



Figure 6. Looking north from underneath the footbridge towards the south abutment. Photograph by Joseph. S. Murphey, USACE.

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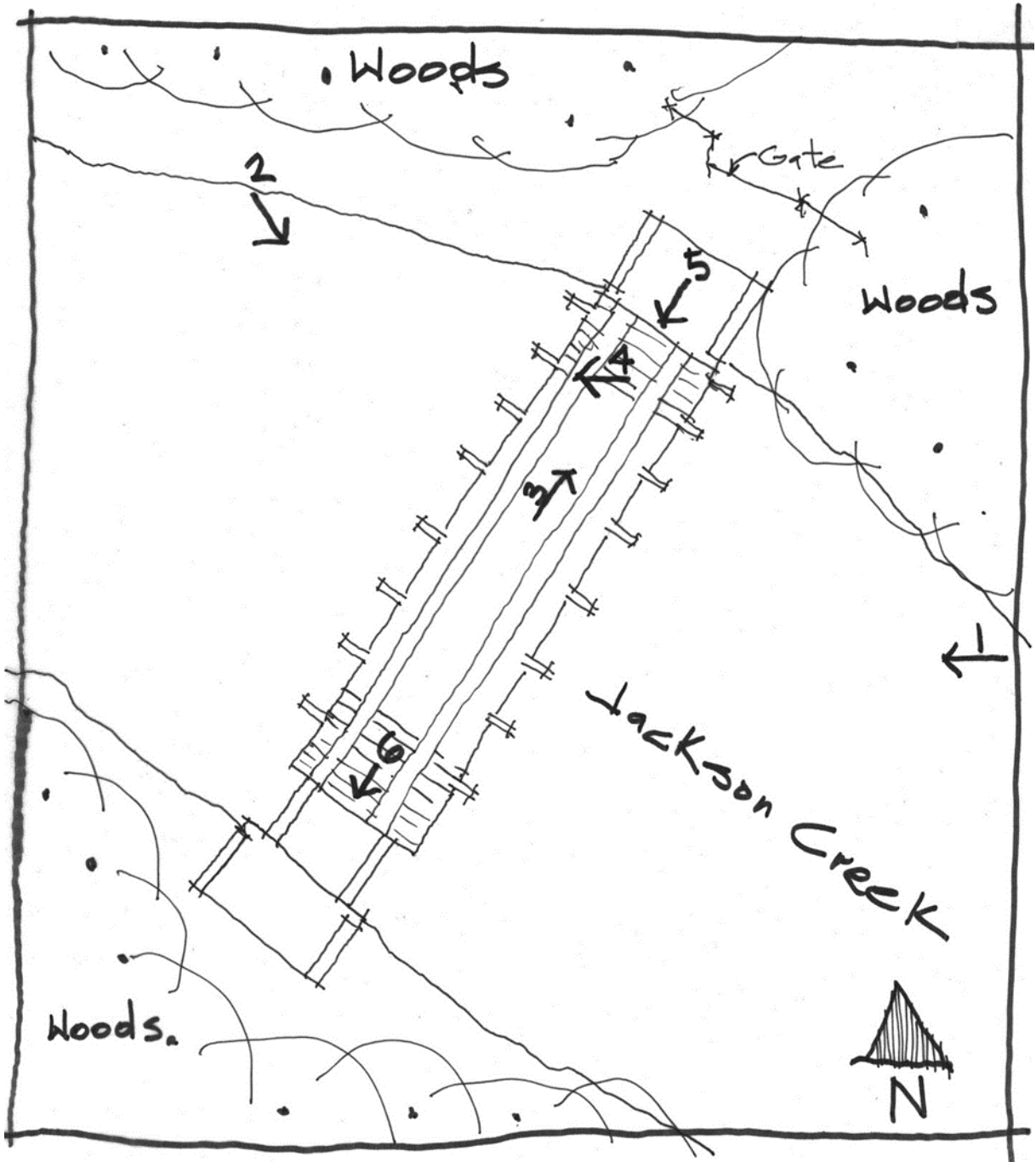
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Photographer: Joseph Scott Murphey, July 2023

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Photographic Key

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