

**Evaluation of the National Register Eligibility of
Stone Culverts on T.H. 74, Whitewater State Park,
Winona County, Minnesota**

**Submitted to the
Minnesota Department of Transportation
S.P. 7909-02 (T.H. 74)
December 26, 2000**

Authorized and funded by the
Minnesota Department of Transportation
and the Federal Highway Administration

Agreement 80070

**Prepared by
Susan Granger, Scott Kelly, and Kay Grossman**

Gemini Research, Morris, Minnesota

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ABSTRACT

A project to evaluate the National Register eligibility of a series of stone culverts on T.H. 74 in Whitewater State Park, Winona County, Minnesota, was conducted in 2000 by Gemini Research. The evaluation was conducted for the Minnesota Department of Transportation, which proposes to replace several culverts and a bridge in and near Whitewater State Park (S.P. 7909-02). Eight culverts were inventoried. It is the recommendation of Gemini Research that seven of the eight culverts be found eligible for the National Register of Historic Places. A determination of eligibility for the eighth culvert was tabled because the culvert is not scheduled for replacement as part of the highway project.

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INTRODUCTION

A Phase II cultural resource evaluation of a series of stone culverts on T.H. 74 within and near Whitewater State Park was conducted in 2000 to determine the structures' eligibility for the National Register of Historic Places. The evaluation was conducted by Gemini Research for the Minnesota Department of Transportation (Mn/DOT), which proposes to replace several culverts and a bridge on T.H. 74 within and near the park (S.P. 7909-02). Whitewater State Park is located in southeastern Minnesota's Winona County about 12 miles north of the town of St. Charles and just south of the town of Elba.

PROJECT OBJECTIVE AND METHODS

■ PROJECT OBJECTIVE

The initial goal of the project was to determine the National Register eligibility of six stone culverts located on T.H. 74 in Whitewater State Park. Two historically-related culverts, located on T.H. 74 immediately north and south of the park boundaries, were added to the inventory by the fieldworkers. Determining the National Register eligibility of the stone culverts will allow Mn/DOT to take significant cultural resources into consideration during project planning, and to fulfill its other obligations under state and federal preservation and environmental law.

■ PROJECT METHODS

Gemini Research used a combination of fieldwork, photography, and archival research to document the physical characteristics and possible historical significance of the culverts. National Register eligibility was determined by applying the National Register Criteria for Evaluation within the statewide historic contexts.

The final products of the evaluation include eight Minnesota Architecture-History Inventory forms with accompanying black and white photographs; a set of color slides; and this final report. Copies of the inventory forms appear in Appendix A of this report.

■ PREVIOUS STUDIES

Minnesota State Park Resources Study

In 1987-1988 the State Historic Preservation Office (SHPO) conducted a study of resources in Minnesota state parks that had been constructed during the Depression by the Civilian Conservation Corps (CCC), the Works Progress Administration (WPA), and other New Deal agencies. Among the study's results was a new statewide historic context called "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." Rolf T. Anderson, the historian who conducted the study, prepared a series of National Register nominations that documented New Deal-built structures and landscapes in several state parks. Anderson's work included the nomination of a 563-acre historic district in Whitewater State Park that encompasses its numerous CCC- and WPA-built resources. The Whitewater State Park historic district was listed on the National Register in October of 1989 under the name "Whitewater State Park CCC/WPA/Rustic Style Historic Resources."

The Whitewater State Park National Register district is historically significant for its associations with the political, social, and economic impact of the Depression on Minnesotans. The district is also associated with the development of various New Deal programs created to combat poverty while at the same time investing in public infrastructure. Whitewater is significant to the development of the Minnesota state park system as the first state-owned recreational facility in

southeastern Minnesota. The structures within the historic district are architecturally significant as a diverse and largely intact collection of park structures featuring Rustic Style designs executed in native limestone. Rolf Anderson also notes in the National Register nomination, "The landscape design for Whitewater State Park is a notable achievement in master planning which successfully located the various functional areas of the park on a problematic site which included land on both sides of State Highway 74" (Anderson Sept. 16, 1988:8-1).

Six of the stone culverts inventoried in the current project are located within the boundaries of the National Register-listed historic district. None of the culverts is specifically mentioned in the National Register nomination.

Minnesota Historic Bridge Inventory

Six of the eight culverts in the current project – those known as Bridges 8592, 8593, 8594, 8595, 5835, and 5836 – were evaluated in 1995 by the Minnesota Historic Bridge Inventory. (The inventory, cosponsored by Mn/DOT and the State Historic Preservation Office, was conducted in 1984-1997.) The two remaining culverts were not included in the Historic Bridge Inventory.

The bridge inventory concluded that the six culverts it evaluated are ineligible for the National Register on the merits of their engineering design. The bridge study evaluated the culverts within the statewide historic context "Iron and Steel Highway Bridges, 1873-1945" (Demian Hess 1995). The bridge inventory did not evaluate the significance of the culverts within the context "Minnesota State Park CCC/WPA/Rustic Style Historic Resources" nor identify them as being located within the bounds of a National Register-listed historic district.

■ EXPECTED RESULTS

It was expected that the stone culverts in and near Whitewater State Park would be found to be historically associated with extensive CCC and WPA construction at the park during the 1930s and early 1940s.

PROJECT RESULTS

■ LIST OF PROPERTIES INVENTORIED

Fieldwork was conducted in August of 2000. The initial goal of the project was to inventory and evaluate six stone culverts on T.H. 74 in Whitewater State Park that are scheduled for replacement by Mn/DOT in S.P. 7909-02. Two related culverts, located on T.H. 74 immediately north and south of the park boundaries, were added to the inventory by the fieldworkers because they appeared to relate to the same T.H. 74 erosion control effort as the first six culverts. (None of the other culverts on T.H. 74 within, and immediately outside of, the park are made of stone and none of the others appear to date from the 1930s or early 1940s.)

Copies of the eight inventory forms appear in Appendix A to this report. The original inventory forms, photo negatives, and color slides have been submitted to the Minnesota Historical Society.

The eight culverts inventoried by Gemini Research and an additional bridge (see page 3.8) are listed below as they appear on T.H. 74 from south to north. (See Fig. 1 for culvert locations.)

Map #	SHPO Inventory #	Mn/DOT Bridge #	Mn/DOT Sta. #	T.H. 74 Ref. Pt.	In State Park?	In NR Distr?	Being Replaced?
1	WN-ELT-043	none	c335		No	No	?
2	WN-ELT-037	8592	362.82	39.50	Yes	Yes	Yes
3	WN-ELT-038	8593	364.20	39.54	Yes	Yes	Yes
4	WN-ELT-039	8594	368.62	39.61	Yes	Yes	Yes
5	WN-ELT-040	8595	373.60	39.71	Yes	Yes	Yes
7	WN-ELT-041	5836	435.90	40.88	Yes	Yes	Yes
8	WN-ELT-042	5835	451.40	41.18	Yes	Yes	Yes
9	WN-ELT-044	none	c503		No	No	No

The northernmost and southernmost culverts do not have Mn/DOT bridge numbers and are not listed in the Mn/DOT T.H. 74 bridge inventory.

■ PHYSICAL DESCRIPTION

All eight culverts inventoried in this project are located along T.H. 74 as it winds through steep, hilly terrain in and near Whitewater State Park. (Six are located within the park and two are just outside the park boundaries.) The culverts carry a series of unnamed drainage streams under T.H. 74 and protect the highway from erosion. (The streams, which are sometimes dry, drain into the Middle Fork of the Whitewater River.) All eight were built around 1941 and all eight were probably built by the Works Progress Administration (WPA) which was renamed the Work Projects Administration (also WPA) in 1939.

All eight culverts are located below road grade. They do not have railings or other elements that project above the roadway and are visible to highway traffic. The culverts are visible, however, to hikers and other pedestrians within the park. (See Fig. 8.)

All eight were constructed using corrugated steel arches (most of them multiplate) that are supported by, and faced with, locally-quarried limestone. The culverts were built in what has been termed the "National Park Service Rustic Style." The limestone was quarried within the park itself. The limestone was used to reduce construction costs (by using readily-available materials), to harmonize the culverts with their natural environment, and to blend the culverts with other Rustic Style limestone buildings and structures within the park.

The span of seven of the culverts ranges from 10'-14'. (The northernmost culvert (WN-ELT-044) has two 4'-diameter barrels.) (See Fig. 11.) Five of the eight culverts are skewed at a 45 degree angle. Seven of the eight (all but the northernmost culvert) have poured concrete floors and 6'- to 9'-tall arches (formed by the multiplate steel resting on low stone sidewalls) through which a person can walk during times when the culverts are dry. (See Fig. 10.) The barrels range from about 40' to about 115' in length. Earthen fill packed on top of the culverts supports the roadbed.

All eight culverts are faced with randomly-laid, roughly-squared limestone blocks. Three of the culverts (the southernmost culvert and Bridges 5836 and 5835) have ring stones or voussoirs that line their arched openings. (See Figs. 2 and 9.) All of the culverts have some form of limestone wing walls.

The five southernmost culverts (WN-ELT-043 and Bridges 8592 through 8595) were built as part of a single, interconnected drainage system. The five culverts are linked by a stone riprapped diversion ditch or channel that collects water from the steep hillsides that flank the highway. The ditch switches back and forth under the highway through the stone culverts. (See Figs. 13, 14, and Fig. 1.) The diversion ditch or channel dates from the 1930s and was riprapped with limestone rubble when it was constructed.

Four of the five culverts in this system (the southernmost culvert and Bridges 8593, 8594, and 8595) have limestone flumes incorporated into their designs. The flumes are open, mortared limestone channels that guide the water from the riprapped ditch into the culverts' openings. Each is about 10' wide and the longest flume is about 40' long. The flumes have mortared limestone sidewalls that are 6'-12' tall, and poured concrete floors. (See Figs. 4 through 7.) All four flumes have stepped limestone spillways to slow the speed of the water (see Figs. 4 through 7). One of the culverts (Bridge 8595) also has a semicircular spillway next to its stepped spillway. (See Fig. 7.)

The northernmost culvert is a double culvert that is accompanied by a different type of flume. The flume carries water down a steep, wooded hillside on the eastern side of T.H. 74 and guides it into the culvert's opening. The flume is a straight, 90'-long, 8'-wide mortared limestone channel. It has 1'-tall limestone sidewalls and a carefully-laid limestone floor. (See Figs. 11 and 12.) Near the flume's upper (eastern) end is a limestone check dam that is 8' tall and extends 32' north and 17' south of the centerline of the flume.

Three structures – the southernmost culvert, Bridge 5836, and the northernmost culvert, are essentially intact. (See Figs. 2 and 8.) Bridges 8592, 8593, 8594, and 8595 have each lost some

stonework on the upper portion of one headwall and at the ends of some wing walls. (See Fig. 3.) The western headwall of Bridge 5835 is in ruins and a newer section of steel culvert has been added. The limestone flumes are generally intact although a small portion of the flume that is adjacent to the northernmost culvert has eroded. The riprapping in the drainage ditch that connects the southern five culverts is somewhat intact. The ditch has eroded in some places and is covered by excess silt in other sections.

See the individual inventory forms in Appendix A for more detail on each of the eight culverts.

■ HISTORICAL BACKGROUND

The eight culverts are associated with state park development and erosion control efforts in and near Whitewater State Park and with the improvement of T.H. 74 through the park. Six of the eight culverts (Bridges 8592 through 8595, 5835, and 5836) are listed in Mn/DOT historical records as having been built by the WPA during the Depression. It is presumed that the other two culverts (the northernmost and southernmost, WN-ELT-044 and WN-ELT-043, respectively), were built at approximately the same time, probably also by the WPA.

Whitewater State Park

Whitewater State Park is located in southeastern Minnesota on T.H. 74 about 12 miles north of the town of St. Charles and just south of the town of Elba.

The Minnesota legislature established the park in 1919. It was one of the first parks in Minnesota's state park system and was preceded by only five others: Itasca, Jay Cook, Interstate, Minneopa, and Fort Ridgely. A group of citizens including Ludvig A. Warming, the editor of the *St. Charles Union*, lobbied the state legislature in 1917 to preserve the area's natural resources by creating a state park. The 1917 legislature approved an appropriation but it was vetoed by the governor. Warming then published a pamphlet entitled *The Paradise of Minnesota: The Proposed Whitewater State Park* whose photographs highlighted the natural beauty of the Whitewater valley's bluffs, gullies, and forests. In the preface Warming states that the book was written to "keep alive the state park project" (Meyer 1991:52-55).

Whitewater State Park was finally established in 1919 but the first 435 acres was not purchased until 1921. In 1937 the park was about 668 acres. Whitewater became a popular destination for daytime tourists in the 1920s because it was located within a day's drive of Minneapolis and St. Paul. In 1926, for example, 40,000 tourists visited the park, making it one of the most popular state parks in Minnesota at the time. Whitewater was extensively developed in the 1930s and early 1940s by the Civilian Conservation Corps (CCC) and the Works Progress Administration (WPA) which successively operated work camps within the park. Through the years, additional land was purchased and today the park encompasses 2,800 acres (Meyer 1991:52-55).

The park is crisscrossed by three rivers, the Root, the Whitewater, and the Zumbro. The majority of the park land is located on the flood plain or valley floor of the Whitewater River. The park is dominated by bluff lands, dolomite cliffs, trout streams, and the woods of the Richard J. Dorer Memorial Hardwood Forest.

Erosion Control

The bluff land within and near Whitewater State Park has long been subject to severe erosion which was exacerbated by late 19th and early 20th century farming practices. Historian Roy Meyer writes that periodic flooding of the Whitewater River has “plagued the park ever since its establishment” (Meyer 1991:55). During the 1930s and 1940s significant new conservation measures were adopted and extensive erosion control work was accomplished by the CCC and the WPA. Similar erosion control efforts were mounted throughout southeastern Minnesota. (Richard J. Dorer, for whom southeastern Minnesota’s state memorial hardwood forest is named, was a leader in these efforts.) The 28,000-acre Whitewater Wildlife Management Area located north of the state park was first established in the early 1940s as part of local conservation measures.

The CCC and WPA erosion control work within and near the park included riprapping river banks and ditches; building diversion channels, check dams, and spillways, and other flood control structures; and planting huge quantities of trees and other vegetation. (See Verharen 1934 for photographs of CCC-built limestone erosion control structures in southeastern Minnesota.) The eight culverts inventoried in the current study were built as part of this effort.

CCC and WPA Camps in Whitewater State Park

At least three crews of CCC and WPA workers were apparently stationed in Whitewater State Park during the Depression:

Camp Name	Dates in Park
CCC Company 1723 (SP-4)	April 1934-Sept. 1934
CCC Company 2709 (SP-9)	July 1934-Oct. 1935
WPA Transient Camp (WC-13?)	Feb. 1936-ca. 1941

The State of Minnesota organized CCC camps in several state parks, including Whitewater, shortly after President Roosevelt established the CCC in March of 1933 as the New Deal’s first major work program. Among the goals of the CCC was to provide relief from poverty while at the same time preserving natural resources (e.g., through forest management, fire prevention, soil conservation, and flood control) and providing recreational benefits (e.g., through park development). Much of the CCC’s work was focused on the improvement of publicly-owned forests and parks. (At the peak of the CCC program in 1935, there were 74 CCC camps operating in Minnesota. By the time the CCC ended in June of 1942, more than 120 camps had been established in the state and 84,000 Minnesotans had served.)

The CCC was a resident program in which enrollees lived away from home in work camps located near the job site. CCC workers received clothing, room, board, and \$30 per month (\$25 of which was sent home to their families). Each 200-man CCC camp was operated by the U.S. Army. Work was supervised by federal agencies like the National Park Service, the U.S. Forest Service, and the U.S. Department of Agriculture, which worked in cooperation with state agencies like the Minnesota Department of Conservation. CCC enrollees were young men between the ages of 18 and 25. Most CCC camps also enrolled several Local Experienced Men (LEMs) who were often older than age 25 and were experienced stonemasons or building tradesmen, or were familiar with local climate, weather conditions, or plant propagation (McClelland 1993:201).

Whitewater State Park's first CCC crew, Company No. 1723 (Camp SP-4), was stationed in the park from April through September of 1934. The crew of 180 was charged with setting up an erosion control camp under the command of Capt. O. G. Lippincott, Infantry Reserve. A CCC camp was built within the park on the eastern side of T.H. 74 near the site of the present South Picnic Area. The company clerk wrote, "Here was a camp set in the heart of nature's garden, protected by the high hills, cooled by the large number of trees, and traversed by a fast running stream teeming with trout. We had found a perfect campsite" (Alleger 1934:159).

Company 1723 was joined by a second CCC crew during the summer months of 1934. On July 1, 1934, Company 2709 (Camp SP-9) moved into Whitewater and worked with the first crew. The first crew was transferred out of the park at the end of the summer on September 30, 1934. Company 2709 stayed in the park for another year until October of 1935.

In February of 1936, after Minnesota's quota of CCC crews had been somewhat reduced, a WPA Transient Camp (apparently named Crystal Springs Camp and numbered WC-13) moved into the vacated CCC camp. The Works Progress Administration (WPA), another New Deal program, had been established by Roosevelt in May of 1935, two years after the CCC was created. (It was renamed and refunded as the Work Projects Administration (also known as the WPA) in 1939.) The WPA was the New Deal's largest work relief program in terms of both funding and scope. In Minnesota, 600,000 people were employed by the WPA during its tenure from 1935-1943. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located. (The others were Itasca, Lake Shetek, Cottonwood River, and Two Rivers (Anderson Sept. 3, 1988:E-27).)

The WPA's program for "transients" had been inherited from the Federal Emergency Relief Administration (FERA) where it had been established in July of 1933 to address the tremendous problem of homelessness during the Depression. The WPA transient program was operated somewhat like the CCC, with resident camps that were located near job sites. In June of 1935 there were 25 WPA camps in Minnesota (sometimes called work camps, transient camps, or treatment centers) that provided food, lodging, clothing, and work specifically for homeless men. (One of the 25 camps operating in June of 1935 was a WPA Transient Camp in the town of Altura located a few miles east of Elba. It is possible that this camp was relocated to the vacated CCC camp in Whitewater State Park in February of 1936.) The WPA remained in Whitewater State Park through at least 1941.

(Note: The vacated CC/WPA camp at Whitewater was used to house German prisoners-of-war during World War II. The camp was destroyed by a tornado in 1953. Only a few remnants exist.)

Structures Built by the CCC and WPA

The CCC built many buildings and structures within the park, in addition to its erosion control work. Among those were the CCC camp itself (1934), a sanitation building (1934), a shelter building (1934-1935), the custodian's cabin (1935), a warehouse and garage (1935), a pumphouse (1935), the kitchen shelter (1935), a diversion dam (1935), the dam and footbridge at the lake (1935), a 3.6-acre swimming lake and beach (1935), a golf course, and a wood and steel footbridge (1935, 1938) (Anderson Sept. 16, 1988:7-1).

The WPA continued the CCC's erosion control work through such activities as planting trees and shrubs, building culverts, and landscaping roadsides. The WPA assisted the Minnesota Department of Highways with the reconstruction of T.H. 74 through the park, and built several park buildings. Among the structures built by the WPA were Bridge 5550 (1936), an expansion of the kitchen shelter (1936), the southern entrance sign (1937), stone curbing at the contact station (ca. 1938), stone curbing at the picnic area parking lot (ca. 1938), the retaining wall at the contact station parking area (ca. 1938), drinking fountains (ca. 1938), the bath house (1938), the northern entrance sign (1938), a combination building (1939), a culvert on the campground trail (1939), overnight cabins (ca. 1939), a garage (1940), stone curbing at the golf course parking area (1940), and a water supply tank (1941) (Anderson Sept. 16, 1988:7-1). In the spring of 1939, the WPA was also grading, quarrying, riprapping trout pools, and reinforcing 10 concrete structures at the Crystal Springs trout hatchery near the park. This facility is associated with the creation of the Whitewater Wildlife Management Area (Anderson Sept. 3, 1988:Exhibit VIII).

All of the limestone for Whitewater State Park's extensive stone buildings, dams, retaining walls, and culverts was obtained from a quarry located within the park south of the CCC camp along Trout Run. The eight culverts that are the subject of this study were built from this stone. All of the CCC- and WPA-built structures, including the culverts, are examples of the National Park Service Rustic Style.

Improving T.H. 74 Through Whitewater State Park

The portion of T.H. 74 that runs through Whitewater State Park was added to the trunk highway system in 1934. The highway through the park was realigned by the Minnesota Department of Highways (MHD) in 1937-1938. Originally gravel, a three-mile section of the highway through (and slightly north of) the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, recounts roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 mentions highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Note on Construction of the Culverts

Four of the culverts (Bridges 8592 through 8595) appear on plan sheets for proposed WPA work within Whitewater State Park. The two sheets were drawn jointly by the National Park Service and the State of Minnesota. The first sheet is a plan of four culverts (Proj. 154A) that is undated but which was signed by various park officials in October of 1936. The sheet's four culverts correspond in location to Bridges 8592 through 8595. Final details were either modified on a later plan sheet or changed slightly in the field because the drawings are not identical to the dimensions and layout of the culverts as they were eventually built (*Whitewater State Park Stone Walls*). The second sheet is a state park base map that is dated March 30, 1937, and was signed the same month. The

base map shows the four skewed culverts drawn on T.H. 74 near the park's southwestern boundary (*Whitewater State Park Base Map*).

Most, or all, of the culverts were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. However, MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). (Historical records for northernmost and southernmost culverts have not been located but they appear to be approximately the same age.) It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

■ EVALUATION OF NATIONAL REGISTER ELIGIBILITY

Bridges 8592, 8593, 8594, 8595, 5836, and 5835

The six stone culverts within Whitewater State Park were evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942" and against the National Register Criteria for Evaluation (36 CFR Part 60.4).

It is recommended that the six culverts within park boundaries be found **ELIGIBLE for the National Register as Contributing elements of the 563-acre historic district known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources."** See "Previous Studies" in the previous chapter of this report for more information on the historic district.

(Note: The Minnesota Historic Bridge Inventory recommended that the six culverts within the park be found ineligible for the National Register on the basis of their engineering design. The bridge inventory concluded that several of the six were too altered to serve as significant examples of their bridge type. Despite these alterations, the culverts retain ample integrity to be considered Contributing elements within the Whitewater State Park National Register historic district.)

Southernmost Culvert (WN-ELT-043)

The National Register eligibility of the southernmost culvert (WN-ELT-043) was evaluated because the culvert is physically connected to Bridges 8592, 8593, 8594, and 8595 as part of a single system linked by a rippapped ditch. It is also nearly identical to Bridges 8592 through 8595. Mn/DOT indicates that it is possible that the southernmost culvert may also need replacement as part of S.P. 7909-02.

The southernmost culvert, although it is located just south of park boundaries, was also evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942" because it is interconnected with Bridges 8592 through 8595 and was probably built at the same time. Like the resources within the National Register historic district, the culvert is associated with an extensive, eight-year New Deal program of state park development, erosion control, and highway improvement in and near Whitewater State Park during the years 1934 through circa 1941. Like the resources within the historic district, it is a notable example of the National Park Service Rustic Style.

It is recommended that the southernmost culvert **be found ELIGIBLE for the National Register.**

Northernmost Culvert (WN-ELT-044)

A determination of National Register eligibility for the northernmost culvert (WN-ELT-044), located just north of park boundaries, was not completed as part of this project for two reasons. The first is that the culvert is not scheduled for replacement as part of S.P. 7909-02. Secondly, the significance of the 90'-long limestone flume adjacent to the culvert can not be determined until more information on comparable New Deal-built structures in southeastern Minnesota is gathered.

■ OTHER PROPERTIES NOTED

The proposed highway project in Whitewater State Park (S.P. 7909-02) also includes the replacement of a truss bridge located on T.H. 74 near the center of the park:

Map #	SHPO Inventory #	Mn/DOT Bridge #	Mn/DOT Sta. #	T.H. 74 Ref. Pt.	In State Park?	In NR Distr?	Being Replaced?
6	WN-ELT-045	85019	392.25	40.06	Yes	Yes	Yes

Bridge 85019 carries T.H. 74 over the Middle Fork of the Whitewater River. (See Fig. 15.) The bridge incorporates a steel, Warren pony truss with a single 87'-span that was moved to the park in 1978. The truss was originally built in 1930 in Dodge County. It was moved to Whitewater in 1978 to replace a multiplate stone-faced bridge at this location that had been damaged by floods. The original bridge had been built in 1936 by the WPA.

Unlike the stone culverts in Whitewater State Park that are the subject of this study, Bridge 85019 does not retain sufficient integrity to be considered a Contributing element within the Whitewater State Park National Register historic district. (While portions of the 1936 bridge's original stone approaches still exist on either side of the recycled truss, their existence does not mitigate the fact that the bridge has been altered significantly.) In 1995 the Minnesota Historic Bridge Inventory evaluated the bridge on the basis of its engineering design and determined that it is ineligible for the National Register under the historic context "Iron and Steel Highway Bridges, 1873-1945" (Jeffrey A. Hess 1995).

ILLUSTRATIONS

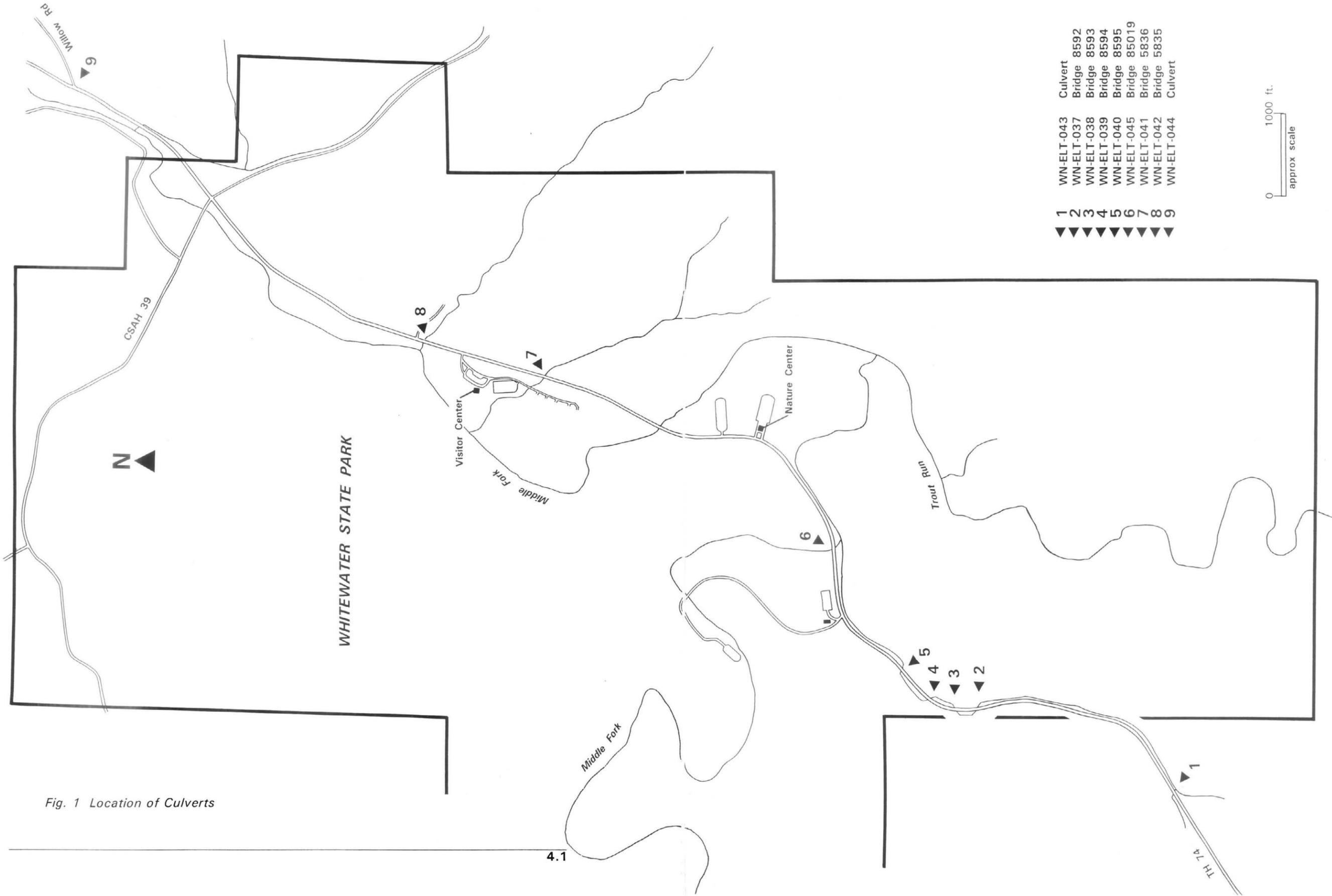


Fig. 1 Location of Culverts



Fig. 2 Southernmost culvert (WN-ELT-043), west end, facing east, Aug. 2000



Fig. 3 Bridge 8592 (WN-ELT-037), west end, facing southeast, Aug. 2000



Fig. 4 Bridge 8593 (WN-ELT-038), flume at west end with spillway, facing south, Aug. 2000



Fig. 5 Bridge 8594 (WN-ELT-039), flume at east end with spillway, facing southeast, Aug. 2000

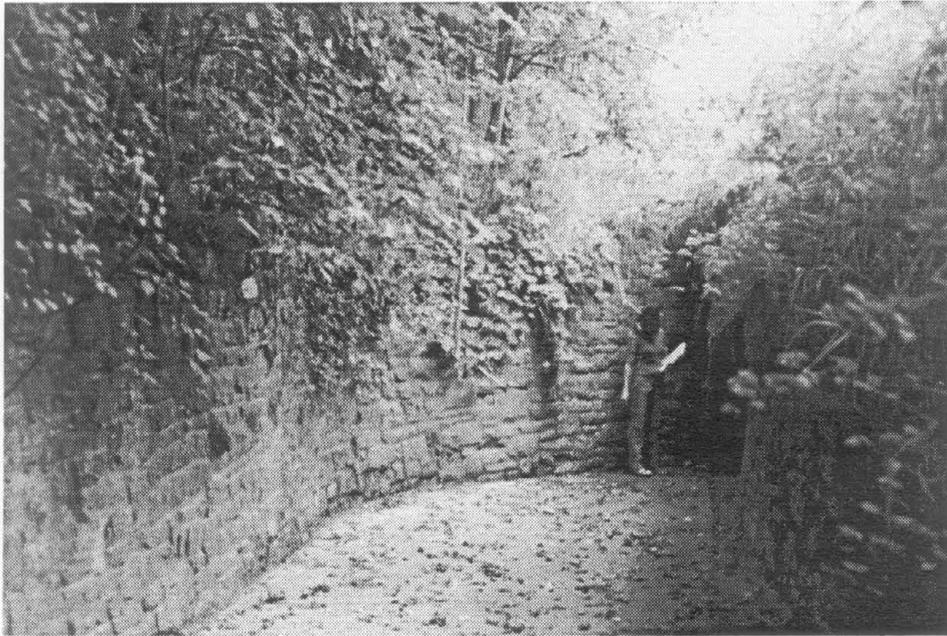


Fig. 6 Bridge 8595 (WN-ELT-040), flume at west end, facing northeast, Aug. 2000

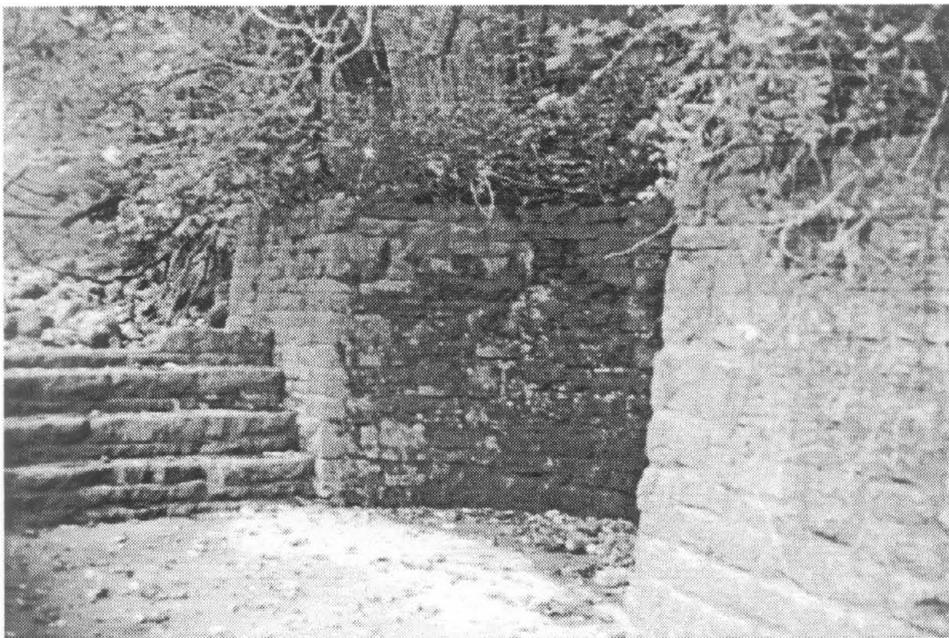


Fig. 7 Bridge 8595 (WN-ELT-040), flume at west end with stepped spillway, circular spillway at right, facing southwest, Aug. 2000

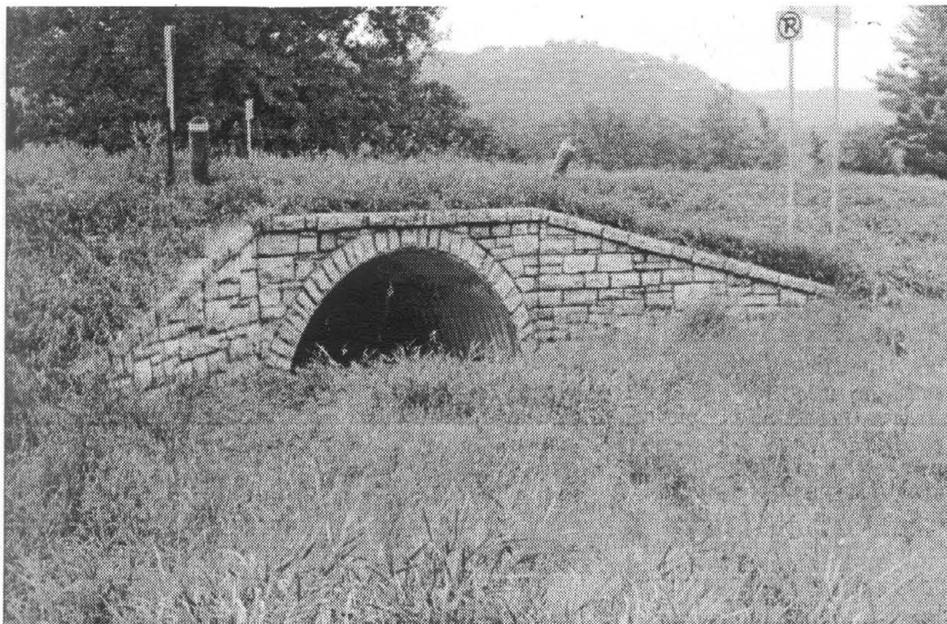


Fig. 8 Bridge 5836 (WN-ELT-041), west end, facing southeast, Aug. 2000



Fig. 9 Bridge 5835 (WN-ELT-042), east end, facing northwest, Aug. 2000



Fig. 10 Bridge 5835 (WN-ELT-042), looking out east end, facing southeast, Aug. 2000



Fig. 11 Northernmost culvert (WN-ELT-044), east end, facing northwest, Aug. 2000



Fig. 12 Northernmost culvert (WN-ELT-044), flume ascending hill, facing southeast, Aug. 2000



Fig. 13 T.H. 74 with rip-rapped channel in western ditch near Bridge 8595, facing southeast, Aug. 2000



Fig. 14 Rip-rapped channel in western ditch of T.H. 74 near Bridge 8595, facing southeast, Aug. 2000

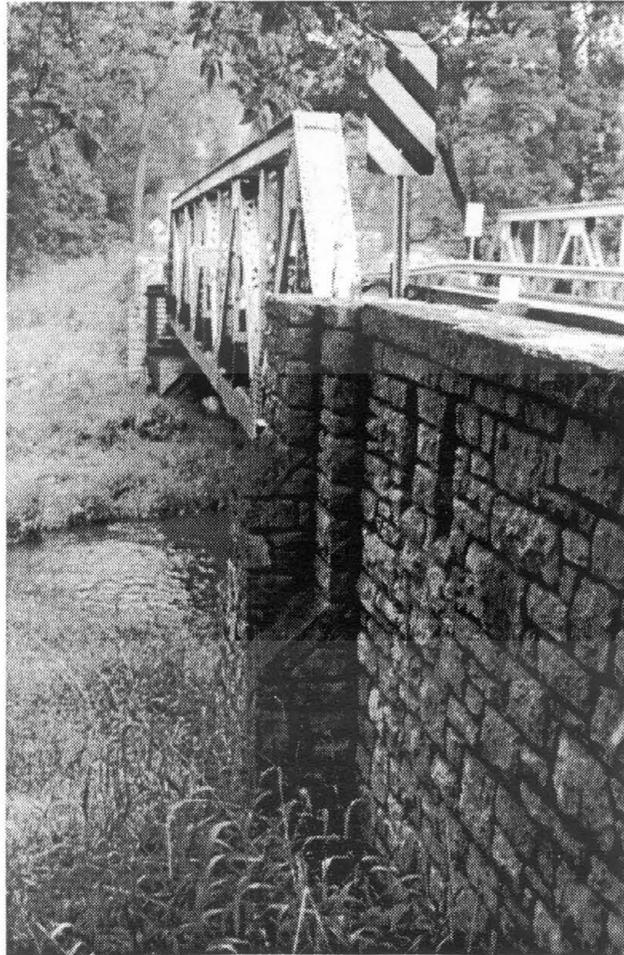


Fig. 15 Bridge 85019, facing east, Aug. 2000

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Whitewater State Park Stone Walls. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13, Proj. 154A. Recommended by Superintendent S. S. Galanter (signed 10/21/36), Approved by Park Authority Harold W. Lathrop (signed 10/26 [sic]). Minnesota Department of Natural Resources.

INVENTORY FORMS

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-037

Historic Name Other Name Location	Bridge 8592 On TH 74 5.4 mi. N of W jct TH 74 and TH 14	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 29 Elba Z15 E575400 N4877200	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	1941 MHD MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor	WPA	Photo #	01.15-20
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	1941

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

Bridge 8592 (WN-ELT-037) is located along T.H. 74 as it winds through steep, hilly terrain within Whitewater State Park. The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) This culvert, one located immediately to the south (an unnamed stone culvert (WN-ELT-043)), and three others located immediately to the north (Bridges 8593, 8594, and 8595) were built as part of a single, interconnected drainage system. This series of five culverts is linked by a stone rip-rapped ditch or channel that collects water from the steep hillsides and switches back and forth under the highway through the five culverts. The drainage channel has been rip-rapped (ca. 1930s) with limestone rubble. Water flows through the culvert from east to west.

The culvert is skewed at a 45 degree angle, creating a 14' span. Influenced by the National Park Service Rustic Style, it is faced with randomly-laid, roughly-squared limestone blocks and has one limestone wing wall (located on the eastern end). (The limestone was quarried within the state park.) The culvert has a poured concrete floor and an approximately 6'-tall arch (formed by a 103'-long multiplate steel culvert resting on 1'-tall stone sidewalls). Earthen fill packed on top of the culvert supports the highway roadbed.

Bridge 8592 has lost some stonework on the upper portions of both headwalls and at the end of the wing wall. There is a modern highway guardrail on both sides of T.H. 74 over the culvert. The rip-rapping in the drainage ditch north and south of the culvert is somewhat intact. It has eroded in some places and is covered by excess silt in other sections.

See Demian Hess, "Bridge 8592," Minnesota Historic Bridge Inventory Form (field inspection Oct. 22, 1995), for more information.

■ **HISTORICAL BACKGROUND**

Bridge 8592 is listed in Mn/DOT historical records as having been built by the WPA during the Depression.

The culvert is one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 in Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

Many of the stone culverts within and near Whitewater were built by a WPA Transient Camp (probably WC-13), which had moved into the vacated CCC camp in Whitewater in February of 1936. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located during the Depression (Anderson Sept. 3, 1988:E-27.) The WPA remained in Whitewater State Park through at least 1941.

During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Four of the stone culverts in the park (Bridges 8592 through 8595) appear on two National Park Service and State of Minnesota plan sheets for proposed WPA work within Whitewater State Park. The first is a plan of the four culverts (Proj. 154A) that is undated but which was signed by various park officials in October of 1936. The sheet shows four culverts (called Culvert No. 1 through 4) that correspond in location to Bridges 8592 through 8595. Final details were either modified on a later plan sheet or changed slightly in the field because the drawings are not identical to the dimensions and layout of the culverts as they were eventually built (*Whitewater State Park Stone Walls*). The second is a state park base map that is dated March 30, 1937, and was signed the same month. The base map shows the four skewed culverts drawn on T.H. 74 near the park's southwestern boundary (*Whitewater State Park Base Map*).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

Bridge 8592 was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." It is recommended that the culvert is ELIGIBLE for the National Register as a Contributing element of the 563-acre historic district that is known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." (The district was listed on the National Register in 1989.)

Note: The Minnesota Historic Bridge Inventory recommends that the culvert be found ineligible for the National Register on the basis of its engineering design and cites integrity concerns. Despite its alterations, the culvert retains ample integrity to be considered a Contributing element within the Whitewater State Park National Register historic district.

■ REFERENCES

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■ PHOTOGRAPHS

▪ **PHOTOGRAPHS**

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-038

Historic Name Other Name Location	Bridge 8593 On TH 74 5.5 mi. N of W jct TH 74 and TH 14	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 29 Elba Z15 E575400 N4877290	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	1941 MHD MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor	WPA	Photo #	01.21-25 02.02-09
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	1941

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

Bridge 8593 (WN-ELT-038) is located along T.H. 74 as it winds through steep, hilly terrain within Whitewater State Park. The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) This culvert, two located immediately to the south (Bridge 8592 and an unnamed stone culvert (WN-ELT-043)), and two others located immediately to the north (Bridges 8594 and 8595) were built as part of a single, interconnected drainage system. This series of five culverts is linked by a stone rip-rapped ditch or channel that collects water from the steep hillsides and switches back and forth under the highway through the five culverts. The drainage channel has been rip-rapped (ca. 1930s) with limestone rubble. Water flows through the culvert from west to east.

The culvert is skewed at a 45 degree angle, creating a 14' span. Influenced by the National Park Service Rustic Style, it is faced with randomly-laid, roughly-squared limestone blocks and has limestone wing walls. (The limestone was quarried within the state park.) It has a poured concrete floor and an approximately 6'-tall arch (formed by an 85'-long multiplate steel culvert resting on 1'-tall stone sidewalls). Earthen fill packed on top of the culvert supports the highway roadbed.

The western end of Bridge 8593 has a 13'-wide, curved limestone flume that guides the water from a rip-rapped ditch into the culvert's opening. The flume is an open, mortared limestone channel that is about 13' wide and about 38' long. It has mortared limestone sidewalls that are about 6' tall, and a poured concrete floor. The beginning of the flume has a 13'-wide stepped limestone spillway (comprise of two limestone steps) to slow the speed of the water.

The western end of Bridge 8593, including the limestone flume, is essentially intact. The eastern end has lost some stonework on the upper portion of the headwall which has been reinforced with steel beams. There is a modern highway guardrail on both sides of T.H. 74 over the culvert. The rip-rapping in the drainage ditch north and south of the culvert is somewhat intact. It has eroded in some places and is covered by excess silt in other sections.

See Demian Hess, "Bridge 8593," Minnesota Historic Bridge Inventory Form (field inspection Oct. 22, 1995), for more information.

■ **HISTORICAL BACKGROUND**

Bridge 8593 is listed in Mn/DOT historical records as having been built by the WPA during the Depression.

The culvert is one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 in Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park

included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

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Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

Bridge 8593 was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." It is recommended that the culvert is ELIGIBLE for the National Register as a Contributing element of the 563-acre historic district that is known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." (The district was listed on the National Register in 1989.)

Note: The Minnesota Historic Bridge Inventory recommends that the culvert be found ineligible for the National Register on the basis of its engineering design and cites integrity concerns. Despite its alterations, the culvert retains ample integrity to be considered a Contributing element within the Whitewater State Park National Register historic district.

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■ PHOTOGRAPHS

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**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-039

Historic Name Other Name Location	Bridge 8594 On TH 74 5.5 mi. N of W jct TH 74 and TH 14	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 29 Elba Z15 E575420 N4877360	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	1941 MHD MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor	WPA	Photo #	03.02-09
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	1941

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

Bridge 8594 (WN-ELT-039) is located along T.H. 74 as it winds through steep, hilly terrain within Whitewater State Park. The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) This culvert, three located immediately to the south (Bridges 8592, 8593, and an unnamed stone culvert (WN-ELT-043)), and one located immediately to the north (Bridge 8595) were built as part of a single, interconnected drainage system. This series of five culverts is linked by a stone rip-rapped ditch or channel that collects water from the steep hillsides and switches back and forth under the highway through the five culverts. The drainage channel has been rip-rapped with limestone rubble. Water flows through the culvert from east to west.

The culvert is skewed at a 45 degree angle, creating a 14' span. Influenced by the National Park Service Rustic Style, it is faced with randomly-laid, roughly-squared limestone blocks and has limestone wing walls. (The limestone was quarried within the state park.) It has a poured concrete floor and an approximately 6'-tall arch (formed by a 100'-long multiplate steel culvert resting on 2'-tall stone sidewalls). Earthen fill packed on top of the culvert supports the highway roadbed.

The eastern end of Bridge 8594 has a curved limestone flume that guides the water from a rip-rapped ditch into the culvert's opening. The flume is an open, mortared limestone channel that is about 10' wide and about 28' long. It has mortared limestone sidewalls that are 6'-12' tall, and a poured concrete floor. The beginning of the flume has a 10'-wide stepped limestone spillway (comprise of four limestone steps) to slow the speed of the water. There are cylindrical tile weepholes in the spillway and flume.

Bridge 8594 has lost some stonework on the upper portion of the eastern headwall (which has been reinforced with steel beams) and at the ends of the wing walls on the western end of the culvert. The limestone flume is generally intact. There is a modern highway guardrail on the eastern side of T.H. 74 over the culvert. The rip-rapping in the drainage ditch north and south of the culvert is somewhat intact. It has eroded in some places and is covered by excess silt in other sections.

See Demian Hess, "Bridge 8594," Minnesota Historic Bridge Inventory Form (field inspection Oct. 22, 1995), for more information.

■ **HISTORICAL BACKGROUND**

Bridge 8594 is listed in Mn/DOT historical records as having been built by the WPA during the Depression.

The culvert is one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 in Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park

included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

Many of the stone culverts within and near Whitewater were built by a WPA Transient Camp (probably WC-13), which had moved into the vacated CCC camp in Whitewater in February of 1936. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located during the Depression (Anderson Sept. 3, 1988:E-27.) The WPA remained in Whitewater State Park through at least 1941.

During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Four of the stone culverts in the park (Bridges 8592 through 8595) appear on two National Park Service and State of Minnesota plan sheets for proposed WPA work within Whitewater State Park. The first is a plan of the four culverts (Proj. 154A) that is undated but which was signed by various park officials in October of 1936. The sheet shows four culverts (called Culvert No. 1 through 4) that correspond in location to Bridges 8592 through 8595. Final details were either modified on a later plan sheet or changed slightly in the field because the drawings are not identical to the dimensions and layout of the culverts as they were eventually built (*Whitewater State Park Stone Walls*). The second is a state park base map that is dated March 30, 1937, and was signed the same month. The base map shows the four skewed culverts drawn on T.H. 74 near the park's southwestern boundary (*Whitewater State Park Base Map*).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

Bridge 8594 was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." It is recommended that the culvert is ELIGIBLE for the National Register as a Contributing element of the 563-acre historic district that is known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." (The district was listed on the National Register in 1989.)

Note: The Minnesota Historic Bridge Inventory recommends that the culvert be found ineligible for the National Register on the basis of its engineering design and cites integrity concerns. Despite its alterations, the culvert retains ample integrity to be considered a Contributing element within the Whitewater State Park National Register historic district.

■ REFERENCES

Anderson, Rolf T. "Minnesota State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Multiple Property Documentation Form. Sept. 3, 1988.

Anderson, Rolf T. "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Registration Form. Sept. 16, 1988.

Granger, Susan, Scott Kelly, and Kay Grossman. *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota*. Submitted to Mn/DOT by Gemini Research. Sept. 29, 2000.

Hess, Demian. "Bridge 8594." Minnesota Historic Bridge Inventory Form. Field inspection Oct. 22, 1995.

Whitewater State Park Base Map. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13. Recommended by Superintendent S. S. Galanter (signed 3/30/37), Approved by Park Authority Harold W. Lathrop (signed 3/31/37). March 30, 1937. Minnesota Department of Natural Resources.

Whitewater State Park Stone Walls. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13, Proj. 154A. Recommended by Superintendent S. S. Galanter (signed 10/21/36), Approved by Park Authority Harold W. Lathrop (signed 10/26 [sic]). Minnesota Department of Natural Resources.

▪ **PHOTOGRAPHS**

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-040

Historic Name Other Name Location	Bridge 8595 On TH 74 5.6 mi. N of W jct TH 74 and TH 14	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 29 Elba Z15 E575530 N4877480	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	1941 MHD MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor	WPA	Photo #	02.10-22
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	1941

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

Bridge 8595 (WN-ELT-040) is located along T.H. 74 as it winds through steep, hilly terrain within Whitewater State Park. The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) This culvert and four located immediately to the south (Bridges 8592, 8593, 8594, and an unnamed stone culvert (WN-ELT-043)) were built as part of a single, interconnected drainage system. This series of five culverts is linked by a stone rip-rapped ditch or channel that collects water from the steep hillsides and switches back and forth under the highway through the five culverts. The drainage channel has been rip-rapped with limestone rubble. Water flows through the culvert from west to east.

The culvert is skewed at a 45 degree angle, creating a 14' span. Influenced by the National Park Service Rustic Style, it is faced with randomly-laid, roughly-squared limestone blocks and has limestone wing walls. (The limestone was quarried within the state park.) It has a poured concrete floor and an approximately 6'-tall arch (formed by a 115'-long multiplate steel culvert resting on 2'6"-tall stone sidewalls). Earthen fill packed on top of the culvert supports the highway roadbed.

The western end of Bridge 8595 has a curved limestone flume that guides the water from a rip-rapped ditch into the culvert's opening. The flume is an open, mortared limestone channel that is 9'-10' wide and about 40' long. It has mortared limestone sidewalls that are about 6' tall, and a poured concrete floor. The beginning of the flume has a 10'-wide stepped limestone spillway (comprise of four limestone steps) to slow the speed of the water. At the base of the stepped spillway is a second, semicircular spillway with a radius of about 4'6".

Bridge 8595 has lost some stonework on the upper portion of the eastern headwall. The limestone mortared flume is generally intact although a few stones are missing from the top of the stepped spillway. The rip-rapping in the drainage ditch south of the culvert is somewhat intact. It has eroded in some places and is covered by excess silt in other sections.

See Demian Hess, "Bridge 8595," Minnesota Historic Bridge Inventory Form (field inspection Oct. 22, 1995), for more information.

■ **HISTORICAL BACKGROUND**

Bridge 8595 is listed in Mn/DOT historical records as having been built by the WPA during the Depression.

The culvert is one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 in Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

Many of the stone culverts within and near Whitewater were built by a WPA Transient Camp (probably WC-13), which had moved into the vacated CCC camp in Whitewater in February of 1936. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located during the Depression (Anderson Sept. 3, 1988:E-27.) The WPA remained in Whitewater State Park through at least 1941.

During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Four of the stone culverts in the park (Bridges 8592 through 8595) appear on two National Park Service and State of Minnesota plan sheets for proposed WPA work within Whitewater State Park. The first is a plan of the four culverts (Proj. 154A) that is undated but which was signed by various park officials in October of 1936. The sheet shows four culverts (called Culvert No. 1 through 4) that correspond in location to Bridges 8592 through 8595. Final details were either modified on a later plan sheet or changed slightly in the field because the drawings are not identical to the dimensions and layout of the culverts as they were eventually built (*Whitewater State Park Stone Walls*). The second is a state park base map that is dated March 30, 1937, and was signed the same month. The base map shows the four skewed culverts drawn on T.H. 74 near the park's southwestern boundary (*Whitewater State Park Base Map*).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

Bridge 8595 was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." It is recommended that the culvert is ELIGIBLE for the National Register as a Contributing element of the 563-acre historic district that is known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." (The district was listed on the National Register in 1989.)

Note: The Minnesota Historic Bridge Inventory recommends that the culvert be found ineligible for the National Register on the basis of its engineering design and cites integrity concerns. Despite its alterations,

the culvert retains ample integrity to be considered a Contributing element within the Whitewater State Park National Register historic district.

■ REFERENCES

Anderson, Rolf T. "Minnesota State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Multiple Property Documentation Form. Sept. 3, 1988.

Anderson, Rolf T. "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Registration Form. Sept. 16, 1988.

Granger, Susan, Scott Kelly, and Kay Grossman. *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota*. Submitted to Mn/DOT by Gemini Research. Sept. 29, 2000.

Hess, Demian. "Bridge 8595." Minnesota Historic Bridge Inventory Form. Field inspection Oct. 22, 1995.

Whitewater State Park Base Map. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13. Recommended by Superintendent S. S. Galanter (signed 3/30/37), Approved by Park Authority Harold W. Lathrop (signed 3/31/37). March 30, 1937. Minnesota Department of Natural Resources.

Whitewater State Park Stone Walls. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13, Proj. 154A. Recommended by Superintendent S. S. Galanter (signed 10/21/36), Approved by Park Authority Harold W. Lathrop (signed 10/26 [sic]). Minnesota Department of Natural Resources.

▪ **PHOTOGRAPHS**

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-041

Historic Name Other Name Location	Bridge 5836 On TH 74 2.7 mi. S of jct TH 74 and CSAH 26	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 20 Elba Z15 E576580 N4878820	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	1941 MHD MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor	WPA	Photo #	04.02-06
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	1941

Fieldwork Date

08-28-00

Prep By

Gemini Research
09-2000

■ **DESCRIPTION**

Bridge 5836 (WN-ELT-041) is located along T.H. 74 just south of the new Whitewater State Park Visitors' Center. The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) Water flows through the culvert from east to west.

An example of the National Park Service Rustic Style, the 12'-span culvert is faced with randomly-laid, roughly-squared limestone blocks and has limestone wing walls. (The limestone was quarried within the state park.) It has an approximately 7'-tall arch (formed by a 40'-long multiplate steel culvert resting on 16"-tall stone sidewalls). Ring stones line the arched opening. The culvert has a poured concrete floor and a spillway on the eastern end. Earthen fill packed on top of the culvert supports the highway roadbed.

Bridge 5836 is essentially intact. Concrete at the floor and spillway area on the western and eastern ends of the culvert has been replaced.

See Demian Hess, "Bridge 5836," Minnesota Historic Bridge Inventory Form (field inspection Oct. 22, 1995), for more information.

■ **HISTORICAL BACKGROUND**

Bridge 5836 is listed in Mn/DOT historical records as having been built by the WPA during the Depression.

The culvert is one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 in Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

Many of the stone culverts within and near Whitewater were built by a WPA Transient Camp (probably WC-13), which had moved into the vacated CCC camp in Whitewater in February of 1936. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located during the Depression (Anderson Sept. 3, 1988:E-27.) The WPA remained in Whitewater State Park through at least 1941.

During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway

through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

Bridge 5836 was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." It is recommended that the culvert is ELIGIBLE for the National Register as a Contributing element of the 563-acre historic district that is known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." (The district was listed on the National Register in 1989.)

■ REFERENCES

Anderson, Rolf T. "Minnesota State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Multiple Property Documentation Form. Sept. 3, 1988.

Anderson, Rolf T. "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Registration Form. Sept. 16, 1988.

Granger, Susan, Scott Kelly, and Kay Grossman. *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota*. Submitted to Mn/DOT by Gemini Research. Sept. 29, 2000.

Hess, Demian. "Bridge 5836." Minnesota Historic Bridge Inventory Form. Field inspection Oct. 22, 1995.

■ PHOTOGRAPHS

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-042

Historic Name Other Name Location	Bridge 5835 On TH 74 2.4 mi. S of jct TH 74 and CSAH 26	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 17 Elba Z15 E576690 N4879260	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	1941 MHD MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor	WPA	Photo #	04.07-12
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	1941

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

Bridge 5835 (WN-ELT-042) is located along T.H. 74 just south of the entrance drive to a Whitewater State Park maintenance building (on the eastern side of T.H. 74). The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) Water flows through the culvert from east to west.

An example of the National Park Service Rustic Style, the 10'-span culvert is faced with randomly-laid, roughly-squared limestone blocks and has limestone wing walls. (The limestone was quarried within the state park.) It has a poured concrete floor and an approximately 9'-tall arch (formed by a multiplate steel culvert resting on stone sidewalls). Ring stones line the arched opening. The culvert has a poured concrete floor and a spillway on the eastern end. Earthen fill packed on top of the culvert supports the highway roadbed.

The eastern end of Bridge 5835 is intact. The western headwall is in ruins and an additional section of steel culvert appears to have been added to the western side. There is a modern highway guardrail on the eastern side of T.H. 74 over the culvert.

See Demian Hess, "Bridge 5835," Minnesota Historic Bridge Inventory Form (field inspection Oct. 22, 1995), for more information.

■ **HISTORICAL BACKGROUND**

Bridge 5835 is listed in Mn/DOT historical records as having been built by the WPA during the Depression.

The culvert is one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 in Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

Many of the stone culverts within and near Whitewater were built by a WPA Transient Camp (probably WC-13), which had moved into the vacated CCC camp in Whitewater in February of 1936. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located during the Depression (Anderson Sept. 3, 1988:E-27.) The WPA remained in Whitewater State Park through at least 1941.

During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway

through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

Bridge 5835 was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942." It is recommended that the culvert is ELIGIBLE for the National Register as a Contributing element of the 563-acre historic district that is known as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." (The district was listed on the National Register in 1989.)

Note: The Minnesota Historic Bridge Inventory recommends that the culvert be found ineligible for the National Register on the basis of its engineering design and cites integrity concerns. Despite its alterations, the culvert retains ample integrity to be considered a Contributing element within the Whitewater State Park National Register historic district.

■ REFERENCES

Anderson, Rolf T. "Minnesota State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Multiple Property Documentation Form. Sept. 3, 1988.

Anderson, Rolf T. "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Registration Form. Sept. 16, 1988.

Granger, Susan, Scott Kelly, and Kay Grossman. *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota*. Submitted to Mn/DOT by Gemini Research. Sept. 29, 2000.

Hess, Demian. "Bridge 5835." Minnesota Historic Bridge Inventory Form. Field inspection Oct. 22, 1995.

■ **PHOTOGRAPHS**

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-043

Historic Name Other Name Location	Culvert On TH 74 4.9 mi. N of W jct TH 74 and TH 14	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 30 Elba Z15 E575050 N4876470	NR Elig HPC Elig	Contributing to District
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	Ca. 1940 MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor		Photo #	01.04-11
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built	
01	Bridge	Ca. 1940	

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

This stone culvert (WN-ELT-043) is located on T.H. 74 just south of the southern boundary of Whitewater State Park in hilly terrain. The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) This culvert and four others located immediately to the north (Bridges 8592, 8593, 8594, and 8595) were built as part of a single, interconnected drainage system. This series of five culverts is linked by a stone rip-rapped ditch or channel that collects water from the steep hillsides and switches back and forth under the highway through the five culverts. The drainage channel has been rip-rapped (ca. 1930s) with limestone rubble. Water flows through the culvert from west to east.

The culvert is skewed at a 45 degree angle and has an approximate 10' span. Influenced by the National Park Service Rustic Style, it is faced with randomly-laid, roughly-squared limestone blocks and has limestone wing walls. (The limestone was quarried within the state park.) It has a poured concrete floor and an approximately 6'-tall arch (formed by a 60'-long multiplate steel culvert resting on low stone walls). Ring stones line the arched opening. Earthen fill packed on top of the culvert supports the highway roadbed.

The western end of the culvert has a limestone flume that guides the water from a rip-rapped ditch into the culvert's opening. The flume is an open, mortared limestone channel that has mortared limestone sidewalls and a poured concrete floor. At the beginning of the flume is a stepped limestone spillway (12' wide at its widest) designed to slow the speed of the water.

The culvert, including its limestone flume, is essentially intact. The rip-rapping in the drainage ditch north of the culvert is somewhat intact. It has eroded in some places and is covered by excess silt in other sections.

■ **HISTORICAL BACKGROUND**

The culvert is presumed to be one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 just south of Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

Many of the stone culverts within and near Whitewater were built by a WPA Transient Camp (probably WC-13), which had moved into the vacated CCC camp in Whitewater in February of 1936. Whitewater was one of five state parks in Minnesota in which WPA Transient Camps were located during the Depression (Anderson Sept. 3, 1988:E-27.) The WPA remained in Whitewater State Park through at least 1941.

During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Four of stone culverts within the park (Bridges 8592 through 8595) appear on two National Park Service and State of Minnesota plan sheets for proposed WPA work within Whitewater State Park. The first is a plan of the four culverts (Proj. 154A) that is undated but which was signed by various park officials in October of 1936. The sheet shows four culverts (called Culvert No. 1 through 4) that correspond in location to Bridges 8592 through 8595. Final details were either modified on a later plan sheet or changed slightly in the field because the drawings are not identical to the dimensions and layout of the culverts as they were eventually built (*Whitewater State Park Stone Walls*). The second is a state park base map that is dated March 30, 1937, and was signed the same month. The base map shows the four skewed culverts drawn on T.H. 74 near the park's southwestern boundary (*Whitewater State Park Base Map*).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

This stone culvert (WN-ELT-043) is physically connected to Bridges 8592, 8593, 8594, and 8595 as part of a single system linked by a rip-rapped ditch and was probably built at the same time, also by the WPA. It is very similar in design to Bridges 8592 through 8595. (See those inventory forms, WN-ELT-037, -038, -039, -040). Although it is located just south of park boundaries, the culvert was evaluated within the statewide historic context "Minnesota State Park CCC/WPA/Federal Relief Programs, 1933-1942" because of its physical and historical links to Bridges 8592 through 8595.

It is recommended that the culvert be found ELIGIBLE for the National Register. Like the resources within the 563-acre historic district within Whitewater State Park (listed on the National Register in 1989 as "Whitewater State Park CCC/WPA/Rustic Style Historic Resources"), the culvert is associated with an extensive, eight-year New Deal program of state park development, erosion control, and highway improvement in and near Whitewater State Park during the years 1934 through circa 1941. Like the resources within the historic district, it is also a notable example of the National Park Service Rustic Style.

■ REFERENCES

Anderson, Rolf T. "Minnesota State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Multiple Property Documentation Form. Sept. 3, 1988.

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-043

Anderson, Rolf T. "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Registration Form. Sept. 16, 1988.

Granger, Susan, Scott Kelly, and Kay Grossman. *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota*. Submitted to Mn/DOT by Gemini Research. Sept. 29, 2000.

Whitewater State Park Base Map. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13. Recommended by Superintendent S. S. Galanter (signed 3/30/37), Approved by Park Authority Harold W. Lathrop (signed 3/31/37). March 30, 1937. Minnesota Department of Natural Resources.

Whitewater State Park Stone Walls. Department of the Interior National Park Service and State of Minnesota Conservation Commission. Region II, Minnesota, W.C. 13, Proj. 154A. Recommended by Superintendent S. S. Galanter (signed 10/21/36), Approved by Park Authority Harold W. Lathrop (signed 10/26 [sic]). Minnesota Department of Natural Resources.

■ PHOTOGRAPHS

**MINNESOTA ARCHITECTURE-HISTORY
INVENTORY FORM**

WN-ELT-044

Historic Name Other Name Location	Culvert and Flume On TH 74 just S of Jct TH 74 and Willow Rd	SHPO Review # PIN#	
City/Township County Twp Rng Sec USGS Quad UTM	Elba Twp Winona 107N 10W Sec 16 Elba Z15 E577580 N4880550	NR Elig HPC Elig	
Addition Block Lot		Historic Use Present Use	Bridge/Culvert/Dam Bridge/Culvert/Dam
Date Built Date Source Original Owner	Ca. 1940 MHD	Foundation Frame Prima Exterior	Metal Frame Stone Cut
Architect Contractor		Photo #	04.13-19
Associated Historic Context	Minnesota State Park CCC/WPA Federal Relief Pgms, 1933-1942		

List of Standing Structures

Feat#	Feature Type	Year Built
01	Bridge	Ca. 1940
02	Other	Ca. 1940

Fieldwork Date
08-28-00

Prep By
Gemini Research
09-2000

■ **DESCRIPTION**

This double culvert and stone flume (WN-ELT-044) is located on T.H. 74 just north of the northern boundary of Whitewater State Park and just south of the townsite of Elba. (It is located about 265' south of Willow Road.) The culvert carries an unnamed drainage stream under T.H. 74, protecting the highway from erosion. (The stream, which is sometimes dry, drains into the Middle Fork of the Whitewater River.) Water flows through the culvert from east to west.

The culvert is faced with randomly-laid, roughly-squared limestone blocks. (The limestone was probably quarried within the state park.) It contains two 4'-diameter, 40'-long corrugated steel culvert barrels. Earthen fill packed on top of the culvert supports the highway roadbed.

Perpendicular to the culvert on the eastern side of T.H. 74 is a limestone flume that carries water down a steep, wooded incline and guides it into the culvert's opening. The flume is a straight, 90'-long, 8'-wide mortared limestone channel. It has 1'-tall mortared limestone sidewalls and a carefully-laid limestone floor. Near its upper (eastern) end is a limestone check dam that is 8' tall and has wing walls that are 17' and 32' wide.

The culvert and flume are essentially intact, although a small portion of the western (lower) end of the flume has eroded away. There is a crack in the floor of the flume near its western end.

■ **HISTORICAL BACKGROUND**

The culvert is presumed to be one of several stone culverts on T.H. 74 that were built by the WPA as part of park development, erosion control, and road construction work on the segment of T.H. 74 that runs from St. Charles to Elba through Whitewater State Park.

The culvert is located on T.H. 74 just north of the boundary of Whitewater State Park, a 2,800-acre park located in southeastern Minnesota about 12 miles north of the town of St. Charles. (The park was established in 1919 and extensively developed in 1934-ca. 1941 by the CCC and WPA. The CCC and WPA had at least three crews of workers stationed in the park from 1934-ca. 1941.)

The Whitewater valley's serious flooding and erosion problems prompted extensive erosion control work in and near the park by the CCC and the WPA during the Depression. Similar erosion control efforts were mounted throughout southeastern Minnesota. CCC and WPA erosion control within and near the park included planting trees and other vegetation, rip-rapping river banks and ditches, and building diversion channels, culverts, spillways, flumes, and check dams.

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During its five years in the park, the WPA conducted erosion control work and built numerous shelters, retaining walls, and other structures, many of them stone (see Anderson Sept. 16, 1988:7-1). The WPA also assisted the Minnesota Department of Highways (MHD) with the reconstruction of T.H. 74 through the park.

The portion of T.H. 74 that runs through Whitewater was added to the trunk highway system in 1934. The highway through the park was realigned by the MHD in 1937-1938. A three-mile section of the gravel highway

through, and slightly north of, the park was first paved in 1939. Bituminous paving was not extended south to St. Charles and north to Elba until 1946.

The WPA assisted the MHD with bridge construction, grading, crushed rock surfacing, and right-of-way seeding along T.H. 74 between St. Charles and Elba in 1936-1941. A WPA progress report for the month of August 1936, for example, cites roadside sloping along the park road and states that "considerable time has been spent on the retaining walls at the ends of the culverts which drain the road ditches. These retaining walls will prevent erosion at the ends of the culverts" (Anderson Sept. 3, 1988:Exhibit VII). Another WPA progress report for the spring of 1939 lists highway sloping and sodding within the park, completion of a stone arch bridge within the park, and highway sloping and the removal of a highway bridge outside of park boundaries (Anderson Sept. 3, 1988:Exhibit VIII).

Most, or all, of the stone culverts in and near the park were probably built when T.H. 74 was realigned in 1937-1938 and before the 1939 paving. The MHD records indicate that Bridges 8592 through 8595, as well as Bridges 5835 and 5836, were built in 1941 (Demian Hess 1995). It is possible that the date 1941 on the MHD records indicates the final completion of work that began in 1937-1938 when the highway was realigned.

See *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota* (Gemini Research, Sept. 29, 2000) for more information.

■ STATEMENT OF SIGNIFICANCE

The limestone flume adjacent to this culvert is suspected to be a rare example of its property type. Both the flume and the culvert are presumed to be related to CCC or WPA construction in and near Whitewater State Park. More comparative information is needed on similar limestone flumes in southeastern Minnesota before National Register eligibility can be determined.

■ REFERENCES

Anderson, Rolf T. "Minnesota State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Multiple Property Documentation Form. Sept. 3, 1988.

Anderson, Rolf T. "Whitewater State Park CCC/WPA/Rustic Style Historic Resources." National Register of Historic Places Registration Form. Sept. 16, 1988.

Granger, Susan, Scott Kelly, and Kay Grossman. *Evaluation of the National Register Eligibility of Stone Culverts on T.H. 74, Whitewater State Park, Winona County, Minnesota*. Submitted to Mn/DOT by Gemini Research. Sept. 29, 2000.

▪ **PHOTOGRAPHS**