

**NDCRS SITE FORM  
ARCHITECTURAL SITES**

Page 1

SITS # 32 TR 745

Field Code 491-11291-105D  
Field Code \_\_\_\_\_

Site Name BRIDGIE  
Site Name \_\_\_\_\_

Map Quad 241 MAX  
Map Quad \_\_\_\_\_

- 1. N½
- 2. E½
- 3. S½
- 4. W½
- 5. NE¼
- 6. SE¼
- 7. SW¼
- 8. NW¼
- 9. C

LTL	<input type="checkbox"/>	Twp	<u>148</u>	R	<u>A19</u>	Sec	<u>25</u>	QQQ	<u>7</u>	QQ	<u>7</u>	Q	<u>8</u>
LTL	<input type="checkbox"/>	Twp	_____	R	_____	Sec	_____	QQQ	<u>8</u>	QQ	<u>8</u>	Q	<u>7</u>
LTL	<input type="checkbox"/>	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	<input type="checkbox"/>	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	<input type="checkbox"/>	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	<input type="checkbox"/>	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

City \_\_\_\_\_

Street # \_\_\_\_\_

Street # \_\_\_\_\_

Street Name \_\_\_\_\_

Street Name \_\_\_\_\_

# of Features 1

<input type="checkbox"/> Feature #	<u>21</u> Feature Type	<input checked="" type="checkbox"/> Condition
<input type="checkbox"/> Construction Date	<input checked="" type="checkbox"/> Context *	<input checked="" type="checkbox"/> Plan Shape *
<input checked="" type="checkbox"/> Feature Date	<input type="checkbox"/> Primary Exterior *	<input type="checkbox"/> Secondary Exterior
<u>114</u> Structural System **	<input type="checkbox"/> Style	<input type="checkbox"/> Architect/Builder
<input checked="" type="checkbox"/> Ethnic	<input type="checkbox"/> Fieldwork Date	

PARKER THROUGH TRUSS \_\_\_\_\_ Other Information

<input type="checkbox"/> Soil Association	<u>15</u> Ecozone	<input checked="" type="checkbox"/> Area Signf	<input type="checkbox"/> MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<input type="checkbox"/> MS Number
<input checked="" type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> ECF
<input checked="" type="checkbox"/> State Registry	<input checked="" type="checkbox"/> National Register		<input type="checkbox"/> TF

Coder Mark Hufstetler/Mary McCormick

Date Coded November 1, 2000

Reconnaissance Survey \_\_\_\_\_

Intensive Survey X

Manuscript/Report Title: Historic Bridges in North Dakota: Revised Edition (2001)

Author (s): Renewable Technologies, Inc.

SITE DATA

FEATURE DATA

SHSND USE

NDCRS ARCHITECTURAL SITE FORM

page 1A

Field Code 49-129-05.0

Feature Number 1

SITS # 32TR

DESCRIPTIVE SECTION

FOUNDATION TYPE

n/a

STORIES

n/a

ROOF TYPE/CORNICE

n/a

WINDOW CONDITION

n/a

DATING METHOD (S)

NDDOT records; professional estimate

PRESERVATION RECOMMENDATION (check all that apply):

- 1)  Individual Nomination
- 2)  Contributes to a potential district
- 3)  No nomination potential
- 4)  Will not contribute to a district
- 5)  Potential district not known at this time; feature would be a contributing element if neighboring properties constitute a district
- 6)  Thematic nomination potential
- 7)  Component of historic site/landscape

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- 8)  Feature has an important physical, spatial, functional, historic or architectural relationship to the site/complex/farmstead
- 9)  Moved: A) relocation occurred within historic period. B) recreates original site, orientation, landscape and spatial relationships. C) compatible in context with neighboring structures. D) relocation has damaged eligibility.
- 10)  Request comparative study of neighboring properties
- 11)  Historical associations require further investigation

DESCRIPTION/INTEGRITY/ELIGIBILITY:

Structure type: steel, two-span (8 panels per span), riveted and bolted Parker through truss, with 3 steel stringer approach spans on the east end and 2 steel stringer approach spans on the west end

Dimensions: 757 feet long, 26 feet wide overall

Substructure: concrete abutments with concrete wing walls; piers under the main spans are solid concrete units with recessed central panels; pier under the approach spans are steel piles

Superstructure:

upper chords: two channel sections with continuous cover plate along the upper flanges and lacing along the lower flanges

lower chords: two channel sections with batten plates along the upper flanges

Urban Legal Description n/a

X SEE CONTINUATION SHEET

**NDCRS ARCHITECTURAL SITE FORM**

Continuation Sheet

page 1A

Field Code 49-129-05.0

SITS # 32TR

verticals: I-beams

diagonals: I-beams

portal bracing: paired angle sections with lacing bars

moveable end: plates with anchor bolts

floor system: 5 I-beam stringers, resting on the I-beam floor beams, riveted to the superstructure

decking: concrete deck with a concrete curb on each side

railing: I-beam posts and a single channel-section rail; concrete end posts at all four ends of bridge

plaque on SW end post: WAR MEMORIAL / BRIDGE NO. 7097 / TRAILL COUNTY / NORTH DAKOTA / 1957

plaque on NW end post: FEDERAL AID / PROJECT / FAS 6621-2 / NORTH DAKOTA / 1957

plaque on NE end post: FEDERAL AID / PROJECT / FAS 6621-2 / MINNESOTA / 1957

plaque on SE end post: POLK COUNTY / MINNESOTA / BRIDGE NO. 7097 / 1957

Integrity: retained

Eligibility: eligible; see page 3 of this site form

NDCRS ARCHITECTURAL SITE FORM

Page 3

Field Code 49-129-05.0

SITS # 32TR

OWNER'S NAME, ADDRESS, PHONE # Traill County

PROJECT TITLE North Dakota Historic Bridge Survey: Year 2000 Update

REPORT TITLE Historic Bridges in North Dakota: revised second edition (2001)

SITE AREA 19,682 (in square feet)

ACCESS:

This bridge is located 9 miles east and 1 mile north of Buxton.

DESCRIPTION:

This bridge—known as the Climax Bridge—carries a paved county road over the Red River of the North, which marks the state line between Traill County, North Dakota and Polk County, Minnesota. The banks of the river at the bridge site are steep and heavily wooded. Adjacent lands consist of flat cultivated fields. Several occupied farmsteads lie within ½ mile east of the site.

No other significant cultural features were noted in the immediate vicinity of the bridge.

SUMMARY OF SITE FEATURES AND EVALUATION OF SIGNIFICANCE:

Site Feature #1: Bridge No. 49-129-05.0. The Structure Inventory and Appraisal (SI&A) sheet prepared for this bridge by the North Dakota Department of Transportation (NDDOT) state that it was built in 1957 and has not been reconstructed. The 1957 construction date is confirmed by plaques on two of the bridge's end posts (see above). This is one of a number of Parker truss bridges across the Red River of the North. It was among the last of these bridges to be constructed, and is also among the last through truss highway bridges to be built in North Dakota.

This bridge displays an extremely high level of integrity. This is a large and very late example of a through truss bridge in North Dakota. The Parker truss design is relatively unusual in the state, and multi-span truss bridges are also uncommon. (Both are found primarily on highway crossings of the Red River.) The bridge is also historically representative of cooperation between the North Dakota and Minnesota highway departments to improve roadway connections between the two states. For these reasons, bridge 49-129-05.0 is eligible for the National Register of Historic Places, with significance under criteria "A" and "C."

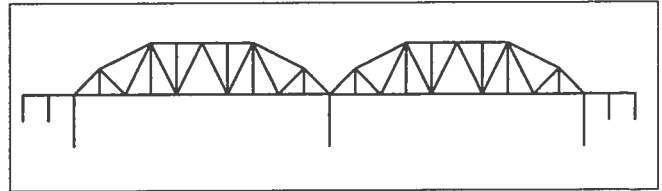
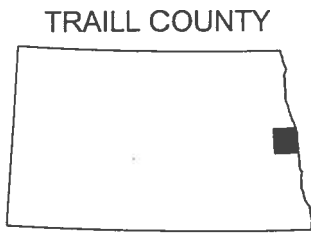
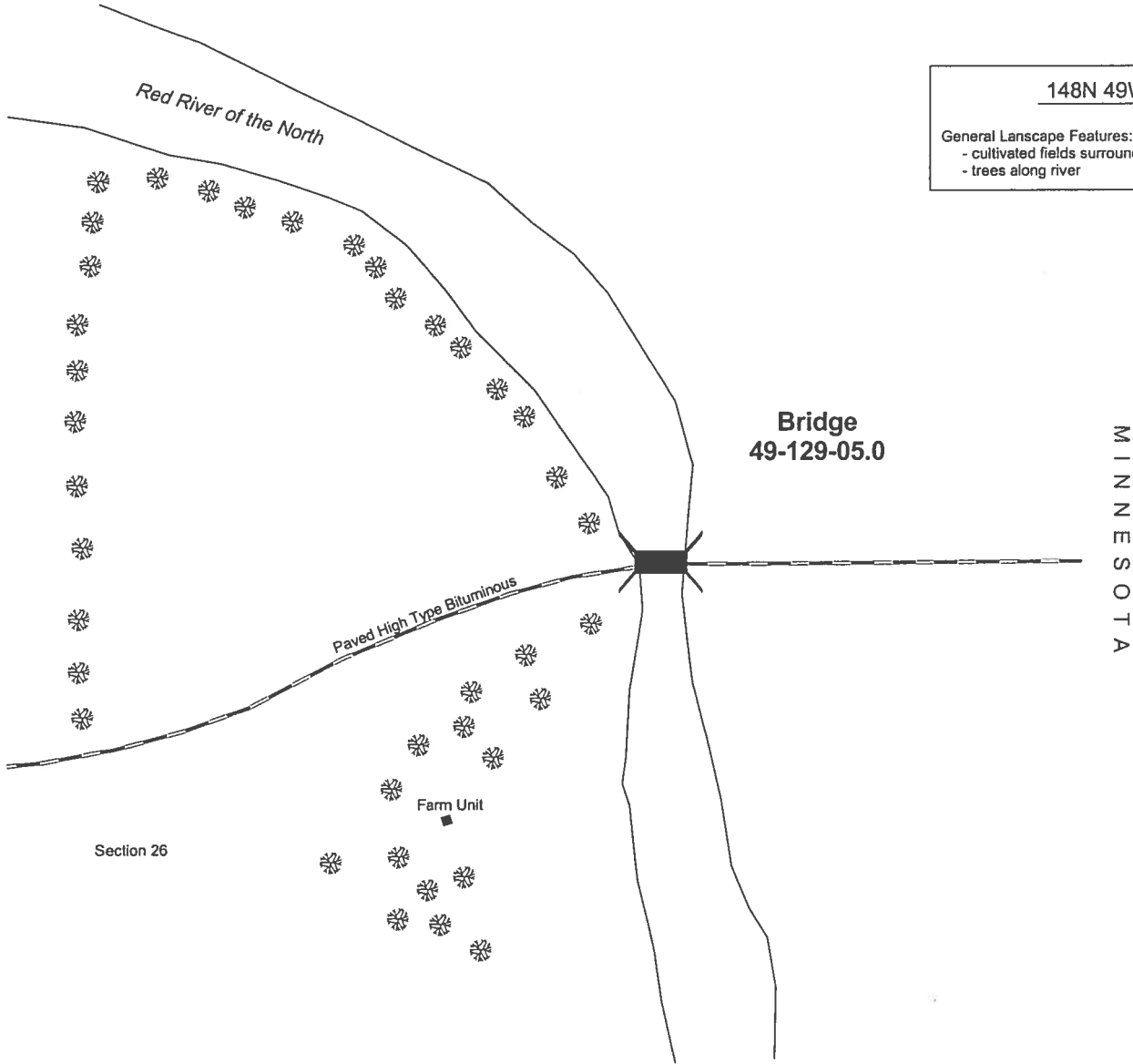
SOURCES:

1. North Dakota Department of Transportation, "Structure Inventory & Appraisal Sheet" for Bridge No. 49-129-05.0, March 1999.
2. North Dakota Department of Transportation. Bridge inspection files for Bridge No. 49-129-05.0
3. Plaques attached to Bridge No. 49-129-05.0

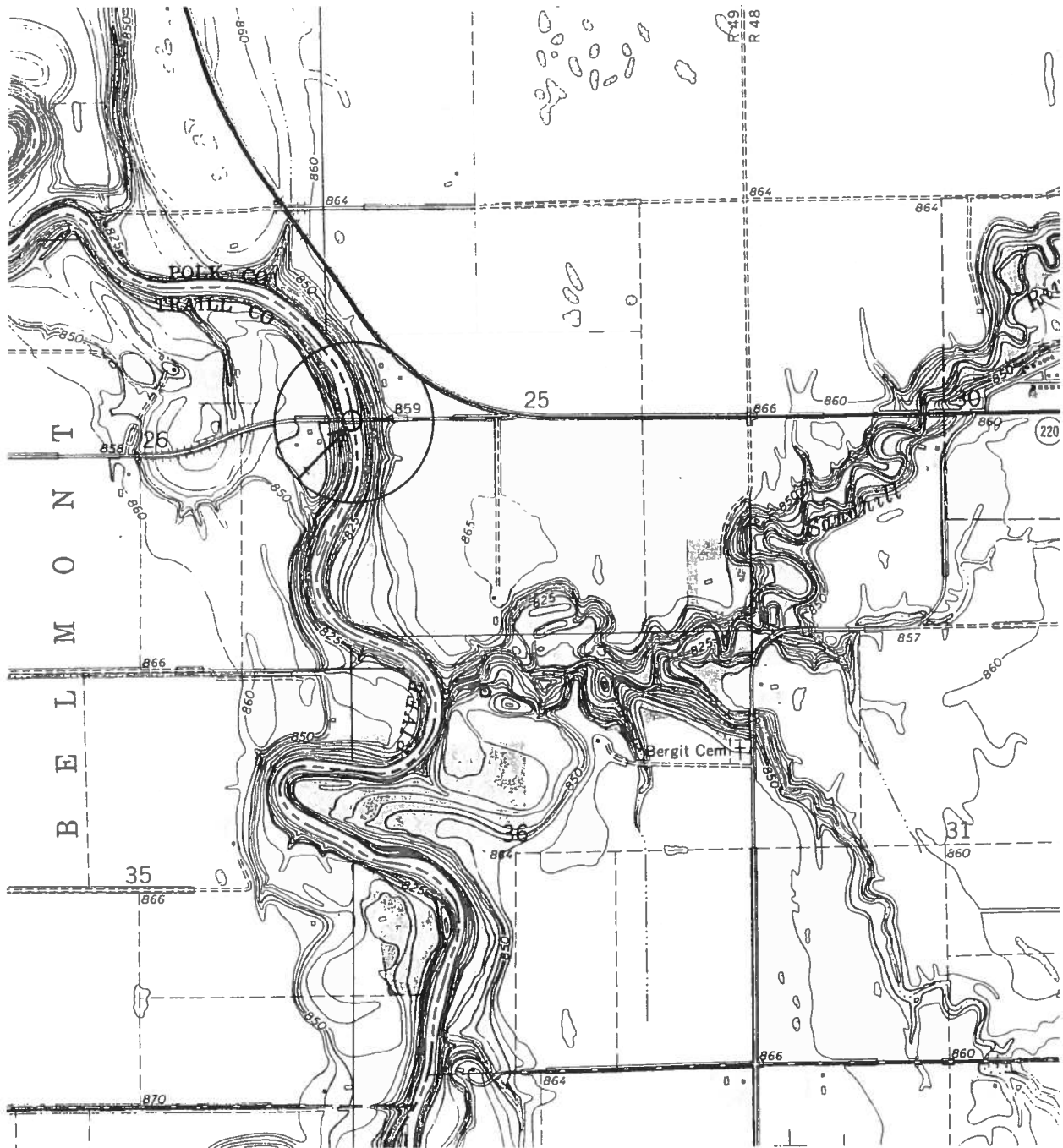
### NORTH DAKOTA BRIDGE INVENTORY-UPDATE 2000



148N 49W  
General Landscape Features:  
- cultivated fields surround site  
- trees along river



Elevation Drawing



NDCRS SITE FORM

Photograph

Field # 49-129-05.0

Site # 32TR

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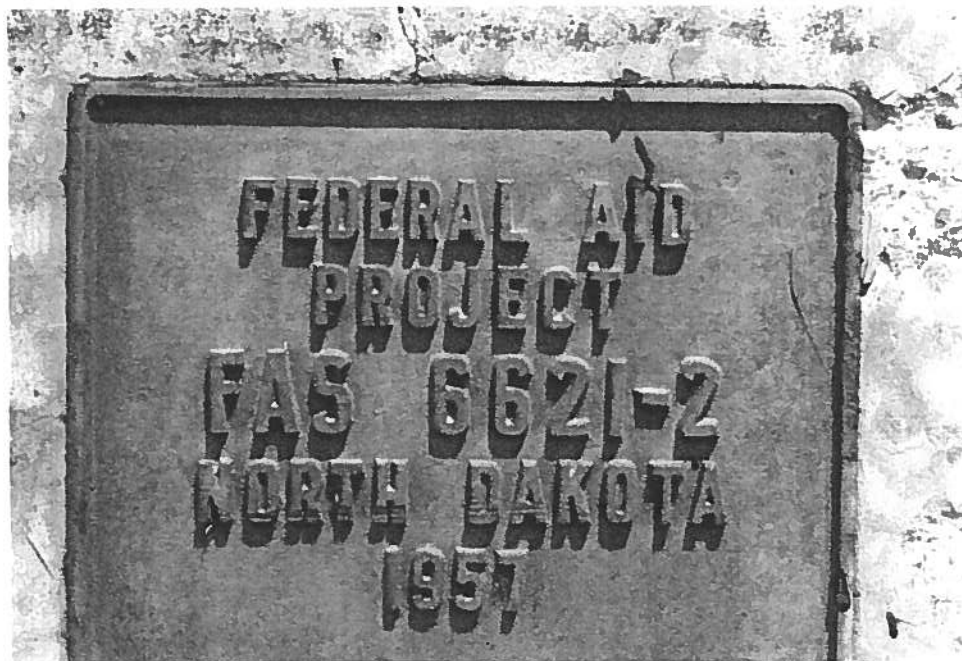
Portal view, facing east.



Three-quarters view, facing southwest.



Plaque at southwest post, facing south.



Plaque at northwest post, facing north.



NDCRS SITE FORM

Photograph

Field # 49-129-05.0

Site # 32TR

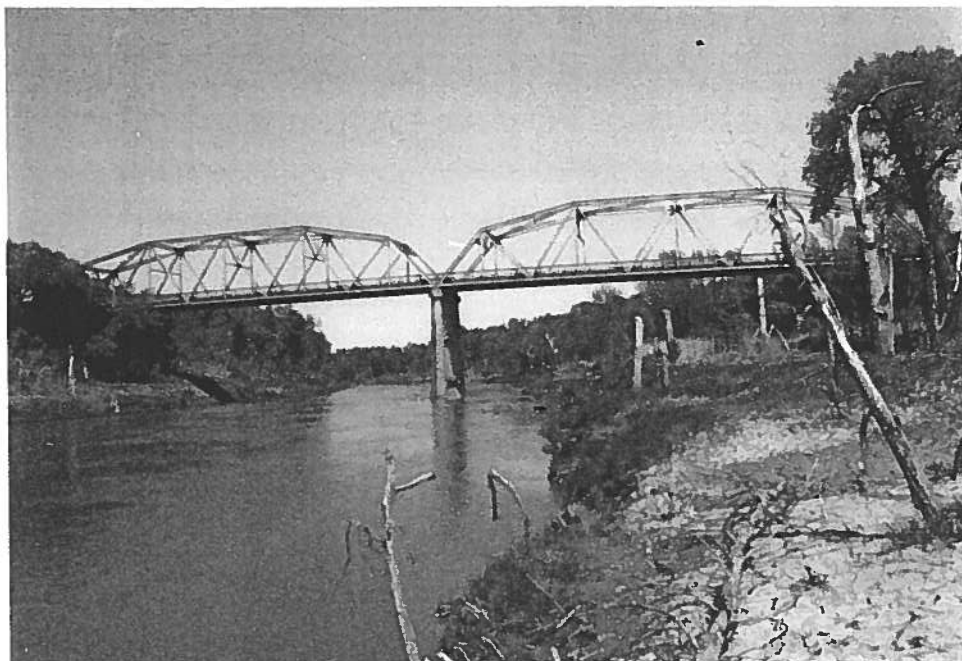
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Center pier, facing west-southwest.

NDCRS SITE FORM    Photograph    Field # 49-129-05.0    Site # 32TR

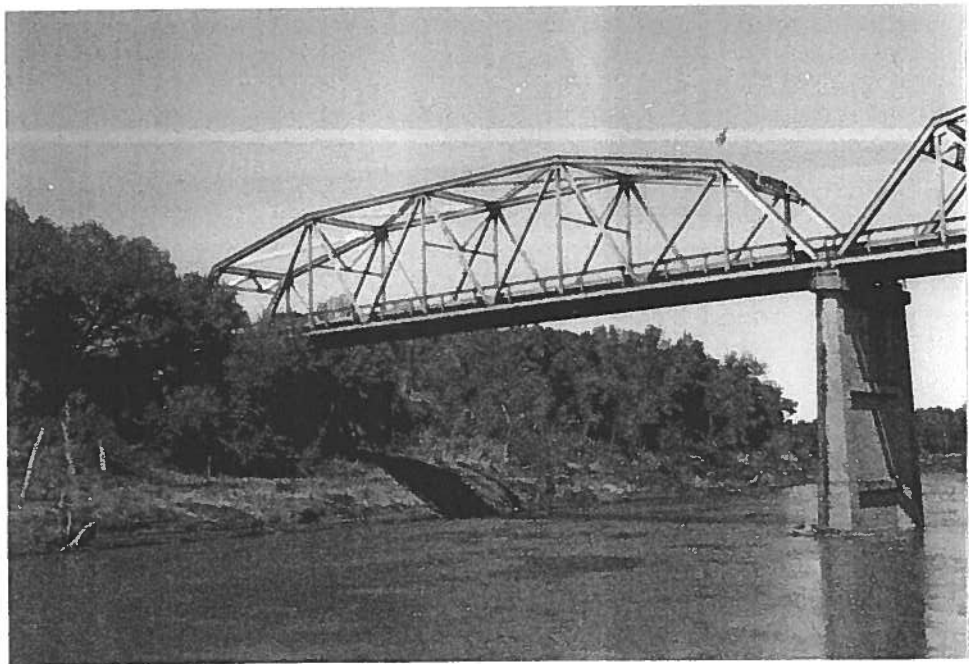
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Elevation view, facing north-northwest.



Elevation of eastern truss, facing north.



Three quarters view of western truss, facing northwest.

February 04, 2013

**North Dakota Department of Transportation**  
**Bridge Inventory - Structure Inventory And Appraisal Sheet**

SEC 409

Structure Number: 49-129-05.0

200 System Designation	2 - County On	Classification	
201 Status	Structurally Deficient	12 Base Highway Network	Not on Base Network
202 Sufficiency Rating	47.70	20 Toll	3 On free road
Identification		21 Maint Responsibility	02 County Hwy Agency
02 Highway District	Fargo District	22 Owner	02 County Hwy Agency
03 County	Trail	26 Functional	Rural, Major Collector
04 City	BINGHAM TOWNSHIP	37 Historical Significance	4 Hist sign not determin
05 Inventory Route	Route On Structure	100 Defense Highway Designation	0 Not a STRAHNET hwy
4 County Hwy 1 Mainline	04906 0 N/A (NBI)	101 Parallel Structure Designation	No    bridge exists
06 Feats Intersect	RED RIVER OF THE NORTH	102 Direction of Traffic	2 2-way traffic
09 Location	9 EAST 1 NORTH BUXTON	103 Temporary Structure Designation	Unknown (NBI)
11 Milepoint	22.496	104 Highway System of Inventory Rte	0 Not on NHS
13 LRS Inv Route. Subroute	-1 -1	105 Federal Lands Highways	Not applicable
16 Latitude	64d 10' 00.00"	110 Designated National Network	0 Not part of natl netwo
17 Longitude	21d 57' 00.00"	112 NBIS Bridge Length	
GPS Coordinates XY	661207.7 5274941.4	226 Functional Under	
98 Border Bridge	27 Minnesota	50.00 %	Condition
99 Border Bridge Struct No.		7097	58 Deck
Structure Type and Material			59 Superstructure
43 Main Struct Type	Steel	60 Substructure	61 Chan. & Chan. Protection
Truss - Thru		61 Chan. & Chan. Protection	62 Culvert and Retaining Walls
44 Approach Struct Type	3 Steel	62 Culvert and Retaining Walls	Load Rating and Posting
			31 Design Load
45 No. Spans in Main Unit	2		M 18 (H 20) (live load for which structure was designated)
46 No. Approach Spans	5		41 Structure Open, Closed or Posted
107 Deck Struct Type	1 Concrete-Cast-in-Place		42 Operating Rating Method
108 Wearing Surface	1 Monolithic Concrete		64 Oper. Rating HS 30
Membrane	0 None		65 Inventory Rating Method
Dk Protect	None		66 Inv. Rating HS 14
208 Dk Overburden	None		70 Bridge Posting
Age and Service			209 Posted in "Tons"
27 Yr Built	1957	106 Yr Reconstructed	-1
42 Type of Service	1 Highway - On	5 Waterway - Under	
28 Lanes on Structure	2		67 Structural Condition
29 ADT	340	30 Year of ADT	2012
109 Average Daily Truck Traffic	10.00		68 Deck Geometry
19 Bypass, Detour Length	10 Miles		69 Underclear. Vert & Horiz
Geometric Data			71 Waterway Adequacy
10 Min Vert Clearance	16 Ft. 2 In.		72 App. Rdwy. Alignment
32 Approach Roadway Width	24 Feet		36 Traffic Safety Features
33 Bridge Median	0 No median		113 Scour Critical
34 Skew	0.00		Inspections
35 Structure Flared	0 No flare		90 Date of Last Inspection
47 Total Horizontal Clearance	24.0 Feet		91 Designated Inspection Frequency
48 Length of Max Span	220 Feet		92 Critical Feature Inspected / 93 Critical Feature Last Inpsction Dt
49 Structure Length	756.89 Feet		Fracture Critical Y 24
50 Curb/Sidewalk Widths	1.0 Ft Rt-Side		Underwater Y 60
	1.0 Ft Lt-Side		Other Special N
51 Bridge Rdwy Width - Curb to Curb	24.0 Feet		218 Channel Profile Y 48
52 Deck Width	25.9 Feet		207 Transporter Erector Routes and Sites
53 Min Vert Clear. Over Bridge	16 Ft. 2 In.		212 Structure Load Rated
54 Min Vert Underclearance	0 Ft. 0 In.		213 Federal Aid Project Number
	N Feature not hwy or RR		214 Delayed Inspection
55 Min Lateral UnderClear. - Rt	327.8 Feet		216 Inspector
	N Feature not hwy or RR		Navigation Data
56 Min Lateral UnderClear. - Lt	0.0 Feet		38 Navigation Control
210 Culvert / 211 Description			39 Navigation Vertical Clearance
			40 Navigation Horizontal Clearance
			111 Pier or Abutment Protection
			116 Minimum Navigation Vertical Clearance

February 04, 2013

**North Dakota Department of Transportation**  
**Bridge Inventory - Structure Inventory And Appraisal Sheet**

SEC 409

Structure Number: 49-129-05.0

Elm/Env	Description	Units	Total Qty	% in 1	1-Qty St	% in 2	2-Qty St	% in 3	3-Qty St	% in 4	4-Qty St	% in 5	5-Qty St
12 / 1	Bare Concrete Deck	(SF)	19,687	0%	0	100%	19,687	0%	0	0%	0	0%	0
113 / 1	Paint Stl Stringer	(LF)	3,786	5%	197	70%	2,643	25%	946	0%	0	0%	0
121 / 1	P/Stl Thru Truss/Bot	(LF)	880	0%	0	25%	220	65%	569	10%	91	0%	0
126 / 1	P/Stl Thru Truss/Top	(LF)	880	0%	0	25%	220	65%	569	10%	91	0%	0
152 / 1	Paint Stl Floor Beam	(LF)	522	0%	0	33%	174	33%	174	33%	174	0%	0
202 / 1	Paint Stl Column	(EA)	12	0%	0	0%	0	100%	12	0%	0	0%	0
215 / 2	R/Conc Abutment	(LF)	52	100%	52	0%	0	0%	0	0%	0	0%	0
234 / 1	R/Conc Cap	(LF)	79	94%	74	0%	5	0%	0	0%	0	0%	0
301 / 1	Pourable Joint Seal	(LF)	469	100%	469	0%	0	0%	0	0%	0	0%	0
303 / 1	Assembly Joint/Seal	(LF)	79	0%	0	100%	79	0%	0	0%	0	0%	0
304 / 1	Open Expansion Joint	(LF)	79	0%	0	100%	79	0%	0	0%	0	0%	0
311 / 1	Moveable Bearing	(EA)	40	0%	0	100%	40	0%	0	0%	0	0%	0
330 / 1	Metal Rail Uncoated	(LF)	1,512	0%	0	0%	0	100%	1,512	0%	0	0%	0
331 / 1	Conc Bridge Railing	(LF)	1,512	0%	0	95%	1,440	5%	72	0%	0	0%	0
361 / 3	Scour Smart Flag	(EA)	1	100%	1	0%	0	0%	0	0%	0	0%	0
362 / 1	Traf Impact SmFlag	(EA)	1	100%	1	0%	0	0%	0	0%	0	0%	0
401 / 2	Wings	(EA)	4	100%	4	0%	0	0%	0	0%	0	0%	0

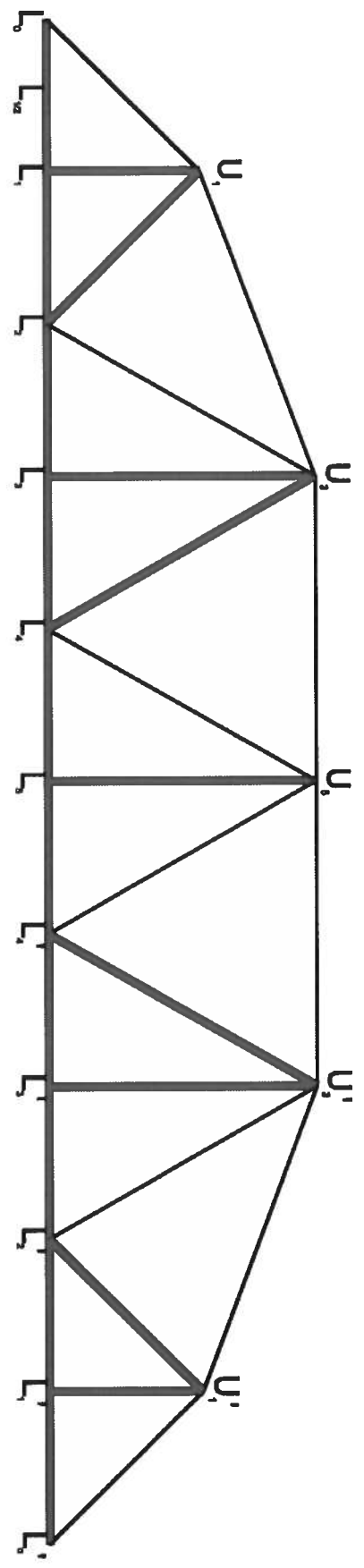
**Remarks:** 9/12/2007 - MnDOT inspected in 2007. B&A end markers on all four corners. Signed "curve" and 45 mph west, "do not pass" & "no passing zone" east. Minor concrete spalling & corroding rebar back of curbs all transverse deck joints at floor beams. Horizontal crack pier 5.  
Expansion joint openings 10/06: 1-0.04', 3-0.29', 5-1.17'.  
11/10 south side plates, 45Deg, 1-1.5', 3-0.33', 5-1.25'.  
10/12 1: N-1.39' S-1.49' / 2: N-0.37' S-0.30' / 3: N-0.89' S-0.91' / 4: N-0.31' S-0.30' / 5: N-1.83' S-1.85' / 6: N-0.27' S-0.23' 43 degrees

**Alert Code 1:** Varying degrees of rust throughout structure. minor scour at pier 3. minor vertical cracking in pier walls nos. 3, 4 and 5. widening crack pier 3 west side from top to bottom.

**Alert Code 2:** Heavy rust & section loss of superstructure members below expansion joints. Pier 4 W rockers tipped W, SE rocker tipped slightly E. Cracked & rusting stiffener & diaphragm welds, mainly west side. All truss cross bracing over roadway are bent.

BR 49-129-05.0

Dir \_\_\_\_\_



— Fracture Critical Members