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BOLLINGER COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
BOLL01	G 688R	Patton Bridge	2- 80' riveted Warren pony truss 1923 C.P. O'Reilly and Co.
BOLL02	J 103	Zalma Bridge	1-100' riveted Pratt through truss 1930 Millers Garage & Constr. Co.
*BOLL03	K 663	Whitewater River Bridge	3-100' steel plate through girder 1936 Kelly and Underwood
*BOLL04	032000.5	Whitewater River Bridge	1-170' pinned Parker through truss 1913 Miller & Borcharding, St. Louis
BOLL05	032002.6	Bridge	1- 24' steel stringer 1919
*BOLL06	045002.5	Whitewater River Bridge	7- 14' concrete slab 1915 county work force [prob.]
*BOLL07	099002.5	Perkin's Ford Bridge	1-130' pinned Pratt through truss 1917
*BOLL08	118000.8	Dry Creek Bridge	1- 60' pinned Pratt pony truss c1900
*BOLL09	124002.4	Laflin Bridge	1-120' pinned Pratt through truss 1908 Stupp Brothers B&I Company
*BOLL10	146001.5	Bridge	1- 45' rivet Pratt/Warren pony truss c1920 R.L. Miller and Co. [prob.]
*BOLL11	160002.0	Clubb Creek Bridge	1- 38' pinned Pratt bedstead 1908 Stupp Brothers B&I Company
BOLL12	165500.1	Crooked Creek Bridge	2- 60' riveted Pratt half-hip pony truss 1908
BOLL13	183001.5	Bridge	1- 50' riveted Pratt/Warren pony truss c1920 R.L. Miller and Co. [prob.]
BOLL14	188002.5	Slagle Creek Bridge	1- 40' riveted Pratt/Warren pony truss c1920 R.L. Miller and Co. [prob.]
*BOLL15	203002.8	Fish Trap Ford Bridge	1-112' pinned Pratt through truss 1912 Stupp Brothers B&I Company
*BOLL16	203003.1	Gipsy Bridge	1-117' pinned Pratt through truss 1900 Stupp Brothers B&I Company

EXCLUDED:

Pratt pony truss

G 315R G 318 G 468R

Warren pony truss

F 747R2 116001.0 124001.7 202005.1

BOLLINGER COUNTY

EXCLUDED (cont.):

Steel stringer

F 751R	S 230	S 231	S 815	T 394	X 54	044001.0
084001.9	087000.6	088003.1	089001.0	096001.4	130000.4	144001.3
149000.9	152000.4	159003.5	164003.2	177000.7	178001.2	189000.3
244000.4						

Concrete girder

G 314	G 449R	G 450R	G 631	H 673	H 860R	H 861R
J 104R						

Concrete slab

H 372R	H 894R	H 895R	027000.6	044001.9	075000.8	135001.4
220003.0	242001.3	256001.7				

Concrete box culvert

F 750R	G 689R	J 907	J 909	J 972	S 261	S 262
S 425	S 833	T 284	T 665	X 518	X 551	174000.0

Timber stringer

003001.6	013000.8	076000.6	147000.0	162000.9	244000.4
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SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	3	14	0	0	17
Excluded	34	33	0	0	67
	37	47	0	0	84 structures

Patton Bridge

BOLL01

GENERAL DATA

structure no.:	G 688R	city/town:	Patton
county:	Bollinger	feature inters.:	Little Whitewater Creek
		cadastral grid:	S36, T33N, R9E
		highway route:	State Highway 51
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 4-panel, rigid-connected Warren pony truss with alternating verticals		
substructure:	concrete abutments, wingwalls and piers		
span number:	1; 1	condition:	good
span length:	80.0'; 60.0'	alterations:	none
total length:	146.0'	floor/decking :	concrete deck over steel stringers
roadway width:	20.0'	other features:	steel pipe guardrails

HISTORICAL DATA

erection date:	1923
erection cost:	\$16,000.00
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	C.P. O'Reilly and Company, St. Louis MO
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 688R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Fourth Biennial Report of the State Highway Commission of Missouri : 1923-24, page 137.
sign. rating:	52
evaluation:	NRHP possibly eligible (early example of early MSHD truss design)

inventoried by: Clayton B. Fraser 15 April 1992

Zalma Bridge

BOLL02

GENERAL DATA

structure no.:	J 103	city/town:	Zalma
county:	Bollinger	feature inters.:	Castor River
		cadastral grid:	S29, T29N, R9E
		highway route:	State Highway 51
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss, with 7 concrete deck girder approach spans

substructure: concrete abutments and wingwalls; concrete hammerhead spill-through piers

span number:	1	condition:	good
span length:	100.0'	alterations:	none
total length:	399.0'	floor/decking :	concrete deck over steel stringers
roadway width:	20.0'	other features:	steel pipe guardrails

HISTORICAL DATA

erection date: 1929-30

erection cost: \$36,578.18

designer: Missouri State Highway Department

fabricator : Inland Steel Company, East Chicago IN

contractor: Millers Garage and Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 103; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 38

evaluation: NRHP non-eligible (typical example of 1920s MSHD truss design)

Inventoried by: Clayton B. Fraser 15 April 1992

Whitewater River Bridge

BOLLO3

GENERAL DATA

structure no.:	K 663	city/town:	1.4 miles north of Sedgewickville
county:	Bollinger	feature inters.:	Whitewater River
		cadastral grid:	S22/23, T33N, R10E
		highway route:	State Supplementary Route K
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel plate through girder, with steel stringer approach span
substructure: concrete abutments, wingwalls and piers

span number:	3	condition:	good
span length:	100.0'	alterations:	none
total length:	356.0'	floor/decking :	concrete deck over steel stringers
roadway width:	22.0'	other features:	steel angle guardrails

HISTORICAL DATA

erection date: 1936
erection cost: \$34,543.60
designer: Missouri State Highway Department
fabricator : unknown
contractor: Kelly and Underwood

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 663; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City, Missouri; Tenth Biennial Report of the State Highway Commission of Missouri: 1935-36, page 263; field inspection by Richard Collier, 26 March 1992.

sign. rating: 57
evaluation: NRHP possibly eligible (long-span example of MSHD standard beam bridge type)

inventoried by: Clayton B. Fraser 15 April 1992

Whitewater River Bridge

BOLL04

GENERAL DATA

structure no.:	032000.5	city/town:	3.4 miles northwest of Sedgewickville
county:	Bollinger	feature inters.:	Whitewater River
		cadastral grid:	S17, T33N, R10E
		highway route:	County Road 32
		highway distr.:	10
		current owner:	Bollinger County

STRUCTURAL DATA

superstructure: steel, 9-panel, pin-connected Parker through truss
substructure: concrete abutments and wingwalls

span number:	1	condition:	fair
span length:	170.0'	alterations:	truss moved, 1936
total length:	173.0'	floor/decking :	timber deck over steel stringers
roadway width:	12.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with bracing; portal strut: A-frame; floor beam: I-beam, field bolted to vertical; guardrail: timber; portal builder's plate: 1913 / Miller & Borcharding / Contractors / St. Louis Mo. / Stupp Bro's / Bridge & Iron Co. Manufacturers / Jacob A. Taylor Presiding Judge / John Owens Associate Judge / Jon. Sitzes [Associate Judge] / Wm. Abernathy County Clerk / J.W. Reilly Engineer

HISTORICAL DATA

erection date: 1913; moved 1936
erection cost: \$3500.00 (engineer's estimate)
designer: unknown
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Miller and Borcharding, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 032000.5; Bollinger County Court Record, Book 13: page 363 (14 August 1912), page 408 (3 December 1912), page 411 (27 December 1912), page 527 (23 September 1913) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

Whitewater River Bridge

sign. rating: 48

evaluation: NRHP possibly eligible (well-preserved example of uncommon structural type, moved to this location)

inventoried by: Clayton B. Fraser 15 April 1992

Bridge

BOLL05

GENERAL DATA

structure no.: 032002.6	city/town: 2.2 miles north of Sedgewickville
county: Bollinger	feature inters.: tributary of Whitewater River
	cadastral grid: S15, T33N, R10E
	highway route: County Road 32
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel stringer	
substructure: concrete abutments and wingwalls	
span number: 1	condition: fair
span length: 24.0'	alterations: unknown
total length: 25.0'	floor/decking : timber deck
roadway width: 12.0'	other features: no guardrails

HISTORICAL DATA

erection date: 1919	
erection cost: unknown	
designer: unknown	
fabricator : unknown	
contractor: unknown	
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 032002.6.
sign. rating: 24	
evaluation:	NRHP non-eligible (undocumented example of an exceedingly common structural type, used for short-span crossings)

inventoried by: Clayton B. Fraser 15 April 1992

Whitewater River Bridge

BOLL06

GENERAL DATA

structure no.:	045002.5	city/town:	1.2 miles north of Sedgewickville
county:	Bollinger	feature inters.:	Whitewater River
		cadastral grid:	S23, T33N, R10E
		highway route:	County Road 45
		highway distr.:	10
		current owner:	Bollinger County

STRUCTURAL DATA

superstructure:	concrete slab		
substructure:	concrete abutments, wingwalls and piers		
span number:	7	condition:	fair
span length:	14.0'	alterations:	none
total length:	107.0'	floor/decking :	concrete deck
roadway width:	12.0'	other features:	no guardrails

HISTORICAL DATA

erection date:	1915
erection cost:	unknown
designer:	county work force (probable)
fabricator :	none
contractor:	county work force (probable)
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 045002.5; field inspection by Richard Collier, 26 March 1992.
sign. rating:	41
evaluation:	NRHP non-eligible (inadequately documented, typical example of an unsophisticated concrete structure)

inventoried by: Clayton B. Fraser 15 April 1992

Perkin's Ford Bridge

BOLL07

GENERAL DATA

structure no.: 099002.5	city/town: 3.3 miles southeast of Lutesville
county: Bollinger	feature inters.: Crooked Creek
	cadastral grid: S15, T30N, R10E
	highway route: County Road 99
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans

substructure: concrete abutments, wingwalls and piers

span number: 1	condition: fair
span length: 130.0'	alterations: substructure replaced
total length: 170.0'	floor/decking : timber deck over steel stringers
roadway width: 11.8'	other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; strut: 2 angles, braced; portal strut: A-frame; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1917
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 099002.5; Bollinger County Court Record, Book 15: page 60 (18 August 1917) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

sign. rating: 34
evaluation: NRHP determined non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 15 April 1992

Dry Creek Bridge

BOLL08

GENERAL DATA

structure no.:	118000.8	city/town:	5.1 miles south of Lutesville
county:	Bollinger	feature inters.:	Dry Creek
		cadastral grid:	S32, T30N, R10E
		highway route:	County Road 118
		highway distr.:	10
		current owner:	Bollinger County

STRUCTURAL DATA

superstructure:	steel, 4-panel, pin-connected Pratt pony truss		
substructure:	concrete abutments and wingwalls; timber pile bent piers		
span number:	1	condition:	fair
span length:	60.0'	alterations:	truss perhaps moved; timber pile bent pier placed under truss
total length:	61.0'	floor/decking :	timber deck over steel stringers
roadway width:	12.0'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eye-bars; counter: round eyerod with unslotted turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pin; no guardrails

HISTORICAL DATA

erection date:	c1900
erection cost:	unknown
designer:	unknown
fabricator :	unknown
contractor:	unknown
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 118000.8; field inspection by Richard Collier, 26 March 1992.
sign. rating:	23
evaluation:	NRHP non-eligible (poorly documented, poorly preserved example of common structural type)

Inventoried by: Clayton B. Fraser 15 April 1992

Laflin Bridge

BOLL09

GENERAL DATA

structure no.: 124002.4	city/town: 0.4 mile south of Laflin
county: Bollinger	feature inters.: Crooked Creek
	cadastral grid: S13, T30N, R10E
	highway route: County Road 124
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with 3 steel stringer approach spans at the north end and 2 steel stringer approach spans at the south end	
substructure: steel pile bent abutments below grade; concrete-filled steel cylinder piers under main span, concrete piers under approach spans	
span number: 1	condition: fair
span length: 120.0'	alterations: deck, guardrails, stringers replaced, 1928
total length: 285.0'	floor/decking : timber deck over steel stringers
roadway width: 12.0'	other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guard-rail: timber on main span, steel angle on approach spans; portal builder's plate: 1908 / Stupp Bro's Bridge & Iron Co / F.M. Wells Pres Judge / M.S. Gladish Associate Judge / H. Muncle Associate Judge / W.M. Abernathy County Clerk / D.R. Sample Co. Surveyor

HISTORICAL DATA

erection date: 1908	
erection cost: \$3700.00	
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO	
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO	
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 124002.4; Bollinger County Court Record, Book 11: page 423 (20 August 1907), page 506 (19 February	

Lafin Bridge

1908), page 527 (17 April 1908), pages 561-62 (16 May 1908); Book 12: pages 42-43 (22 October 1908), page 60 (11 November 1908); Book 17: page 471 (8 May 1928) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

sign. rating: 46
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 15 April 1992

Bridge

BOLL10

GENERAL DATA

structure no.: 146001.5	city/town: 4.4 miles southeast of Dongola
county: Bollinger	feature inters.: Ditch No. 8
	cadastral grid: S25/30/31/36, T29N, R10/11E
	highway route: County Road 146
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt / Warren pony truss
substructure: concrete abutments and wingwalls

span number: 1	condition: fair
span length: 45.0'	alterations: none
total length: 46.0'	floor/decking : timber deck over steel stringers
roadway width: 14.0'	other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: 1 channel; diagonal: 1 channel; lateral bracing: round rod with threaded ends; floor beam: I-beam

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: R.L. Miller and Company, St. Louis MO [probable]
fabricator : Inland Steel Company, East Chicago IN
contractor: R.L. Miller and Company, St. Louis MO [probable]

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 146001.5; field inspection by Richard Collier, 26 March 1992.

sign. rating: 38
evaluation: NRHP non-eligible (well-preserved example of an uncommon structural type, but lacking in documentation)

inventoried by: Clayton B. Fraser 15 April 1992

Clubb Creek Bridge

BOLL11

GENERAL DATA

structure no.:	160002.0	city/town:	3.1 miles northeast of Zalma
county:	Bollinger	feature inters.:	Clubb Creek
		cadastral grid:	S14/23, T29N, R9E
		highway route:	County Road 160
		highway distr.:	10
		current owner:	Bollinger County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: cut-off bedstead legs set in concrete abutments

span number:	1	condition:	good
span length:	38.0'	alterations:	truss moved, 1927
total length:	38.0'	floor/decking :	timber deck over steel stringers
roadway width:	12.0'	other features:	upper chord and upright end post: 2 channels with batten plates; lower chord: 2 angles with batten plates, 2 looped rectangular eye-bars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eye-bars, 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1908; moved 1927
erection cost: \$950.00
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Cambria Steel Company, Pittsburgh PA
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 160002.0; Bollinger County Court Record, Book 11: page 423 (3 September 1907), page 470 (10 February 1908), pages 536-37 (12 May 1908), page 604 (29 May 1908), page 613 (23 July 1908); Book 12: pages 28-29 (9 September 1908), page 36 (15 October 1908), page 78 (14 November 1908), pages 92-93 (31 December 1908), page 110 (9 February 1909); Book 17: page 42 (7 December 1925), page 138 (9 August 1926), page 309 (3 August 1927), pages 315-16 (22 August 1927), page 331 (10 September 1927) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

Clubb Creek Bridge

sign. rating: 30

evaluation: NRHP non-eligible (typically configured, poorly preserved example of common structural type)

inventoried by: Clayton B. Fraser 15 April 1992

Crooked Creek Bridge

BOLL12

GENERAL DATA

structure no.: 165500.1	city/town: Glenallen
county: Bollinger	feature inters.: Crooked Creek
	cadastral grid: S35, T31N, R9E
	highway route: town street
	highway distr.: 10
	current owner: Town of Glenallen

STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected Pratt half-hip pony truss; steel, 3-panel, rigid-connected Warren pony truss approach span	
substructure: concrete abutments, wingwalls and pier	
span number: 1; 1	condition: fair
span length: 60.0'; 40.0'	alterations: unknown
total length: 102.0'	floor/decking : timber deck
roadway width: 12.0'	other features: steel angle guardrails

HISTORICAL DATA

erection date: 1908
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 165500.1.

sign. rating: 28

evaluation: NRHP non-eligible (poorly documented, poorly preserved truss bridge)

inventoried by: Clayton B. Fraser 15 April 1992

Bridge

BOLL13

GENERAL DATA

structure no.: 183001.5	city/town: 4.4 miles south of Greenbrier
county: Bollinger	feature inters.: drainage ditch
	cadastral grid: S34/35, T28N, R9E
	highway route: County Road 183
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt / Warren pony truss
substructure: concrete abutments and wingwalls

span number: 1	condition: fair
span length: 50.0'	alterations: unknown
total length: 51.0'	floor/decking : timber deck
roadway width: 12.0'	other features: steel angle guardrails

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: R.L. Miller and Company, St. Louis MO [probable]
fabricator : unknown
contractor: R.L. Miller and Company, St. Louis MO [probable]

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 183001.5.

sign. rating: 43
evaluation: NRHP non-eligible (undocumented example of an uncommon structural type)

inventoried by: Clayton B. Fraser 15 April 1992

Slagle Creek Bridge

BOLL14

GENERAL DATA

structure no.:	188002.5	city/town:	4.1 miles south of Zalma
county:	Bollinger	feature inters.:	Slagle Creek
		cadastral grid:	S18, T28N, R8E
		highway route:	County Road 188
		highway distr.:	10
		current owner:	Bollinger County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt / Warren pony truss
substructure: concrete abutments and wingwalls

span number:	1	condition:	good
span length:	40.0'	alterations:	unknown
total length:	40.0'	floor/decking :	timber deck
roadway width:	12.0'	other features:	steel angle guardrails

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: R.L. Miller and Company, St. Louis MO [probable]
fabricator : unknown
contractor: R.L. Miller and Company, St. Louis MO [probable]

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 188002.5.

sign. rating: 38
evaluation: NRHP non-eligible (undocumented example of an uncommon structural type)

inventoried by: Clayton B. Fraser 15 April 1992

Fish Trap Ford Bridge

BOLL15

GENERAL DATA

structure no.: 203002.8	city/town: 0.7 mile north of Gipsy
county: Bollinger	feature inters.: Castor River
	cadastral grid: S28, T29N, R8E
	highway route: County Road 203
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with pin-connected Pratt pony truss and steel stringer approach spans

substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers under main span and pony approach; timber pile bent piers under steel stringer approach spans

span number: 1	condition: fair
span length: 112.0'	alterations: truss moved
total length: 222.0'	floor/decking : timber deck over steel stringers
roadway width: 11.5'	other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars (2 punched rectangular eyebars on pony approach span); counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 1 channel (2 angles on pony approach span)

HISTORICAL DATA

erection date: 1911-12; moved 1927-28

erection cost: \$2000.00 (original construction); \$1890.00 (re-erection)

designer: Stupp Brothers Bridge and Iron Company, St. Louis MO

fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO;
Illinois Steel Company, Chicago IL

contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO;
Missouri Bridge and Iron Company, St. Louis MO (re-erection)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 203002.8; Bollinger County Court Record, Book 13: page 73 (13 May 1911), page 130 (22 May 1911), page 155 (17 August 1911), pages 166-67 (8 September 1911), page 231 (7 February 1912); Book 17: page 20 (10 September 1925), page

Fish Trap Ford Bridge

42 (7 December 1925), page 138 (9 August 1926), page 309 (3 August 1927), pages 315-16 (22 August 1927), page 331 (10 September 1927), page 337 (30 September 1927), page 401 (5 March 1928) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

sign. rating: 33

evaluation: NRHP non-eligible (typically configured example of common structural type, moved to this location)

inventoried by: Clayton B. Fraser 15 April 1992

Gipsy Bridge

BOLL16

GENERAL DATA

structure no.: 203003.1	city/town: 0.5 mile north of Gipsy
county: Bollinger	feature inters.: Lick Log Creek
	cadastral grid: S28, T29N, R8E
	highway route: County Road 203
	highway distr.: 10
	current owner: Bollinger County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1	condition: good
span length: 117.0'	alterations: moved
total length: 117.0'	floor/decking : timber deck over steel stringers
roadway width: 11.8'	other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: timber

HISTORICAL DATA

erection date: 1900; moved 1936
erection cost: \$2125.00
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 203003.1; Bollinger County Court Record 9: page 374 (18 November 1899), page 379 (December 1899), page 388 (12 February 1900), page 416 (14 May 1900), page 430 (18 May 1900), page 483 (13 August 1900), page 488 (14 August 1900); field inspection by Richard Collier, 26 March 1992.

sign. rating: 37
evaluation: NRHP non-eligible (typical example of mainstay structural type, moved to this location)

inventoried by: Clayton B. Fraser 15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Patton Bridge
MHTD: G 688R

BOLL01

DATE(S) OF CONSTRUCTION

1923

LOCATION

State Highway 51 over Little Whitewater Creek; S36, T33N, R9E
Patton; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 52)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 1; 1
span length: 80.0'; 60.0'
total length: 146.0'
roadway wdt.: 20.0'

superstructure: steel, 4-panel, rigid-connected Warren pony truss with alternating verticals
substructure: concrete abutments, wingwalls and piers
floor/decking: concrete deck over steel stringers
other features: steel pipe guardrails

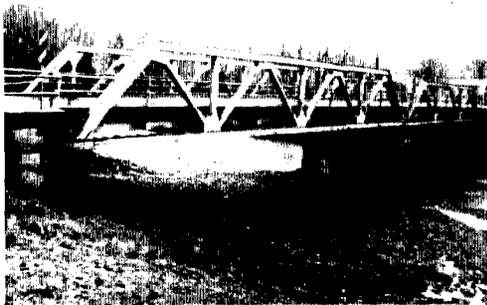
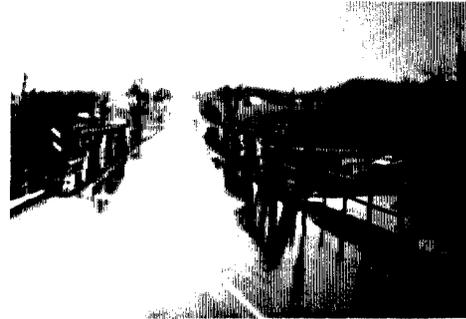
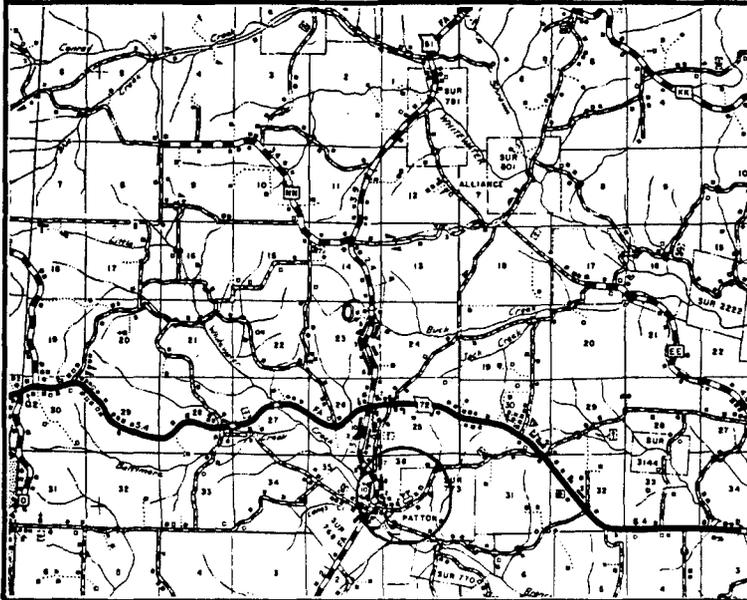
Located in the small town of Patton, this two-span pony truss carries State Highway 51 over Little Whitewater Creek. The unequal-length channel spans are rigid-connected Warren pony trusses, carried by a concrete substructure. The Patton Bridge was designed late in 1922 by engineers for the Missouri State Highway Department. On December 27th a contract to build the bridge was awarded to C.P. O'Reilly and Company of St. Louis. The contractors used steel rolled by the Illinois Steel Company for the truss, completing the bridge later that year. Total cost: approximately \$16,000.00. Since its completion, the Patton Bridge has functioned in place, with no serious alterations.

The Missouri State Highway Department used riveted Warren configurations for its pony trusses almost from the time the agency developed its first bridge standards around 1920. Structurally straightforward and versatile, these ubiquitous trusses were erected by the hundreds throughout the state in span lengths ranging from 40 to 100 feet. The Patton Bridge is distinguished among Missouri's Warren trusses as among the oldest extant examples of this mainstay structural type.

NAME(S) OF STRUCTURE

Patton Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 688R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; **Fourth Biennial Report of the State Highway Commission of Missouri: 1923-24, page 137.**

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Whitewater River Bridge
MHTD: K 663

BOLL03

DATE(S) OF CONSTRUCTION

1936

LOCATION

State Supplementary Route K over Whitewater River; S22/23, T33N, R10E
1.4 miles north of Sedgewickville; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 57)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 3

span length: 100.0'

total length: 356.0'

roadway wdt.: 22.0'

superstructure: steel plate through girder, with steel stringer approach span

substructure: concrete abutments, wingwalls and piers

floor/decking: concrete deck over steel stringers

other features: steel angle guardrails

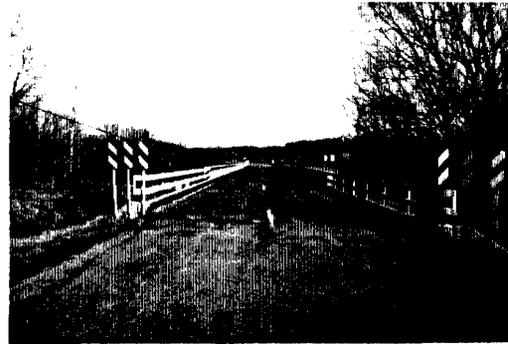
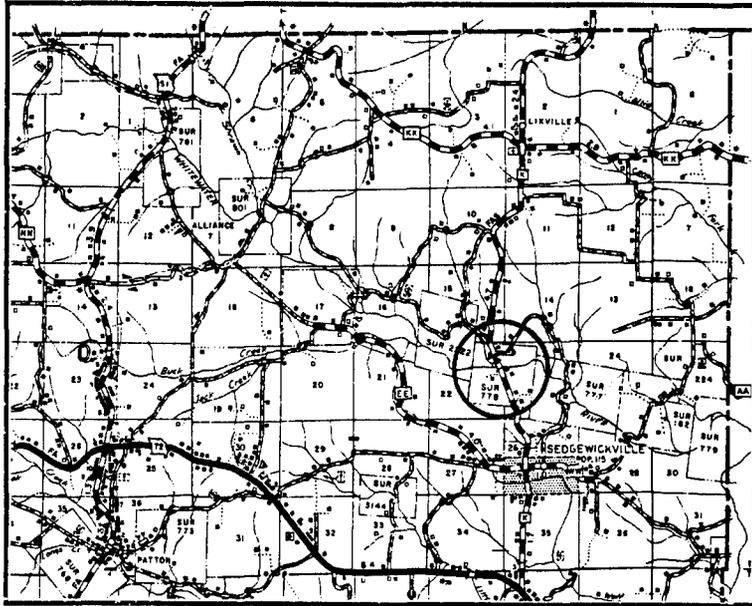
This large-scale crossing of the Whitewater River is located on State Supplementary Route K about 1½ miles northwest of Sedgewickville, in northwestern Bollinger County. Comprised of three 100-foot plate through girder spans and one steel stringer approach span, the structure was designed by the State Highway Department in early spring 1936. A \$34,543.60 contract for its erection was let on April 10, 1936, to Kelly and Underwood. The structure was completed as planned, and it has since carried light to moderate traffic on Supplementary Route K, which extends from State Highway 72 south of the bridge, to Interstate 55 in Perry County to the north. The current Whitewater River Bridge was not the first at this location. In 1913 Miller and Borcharding of St. Louis erected a 170-foot Parker through truss here. Known as the Seabaugh's Mill Bridge, this structure was moved to a location upstream when the new bridge was built in 1936. Located 1½ miles west of its original site, the old Seabaugh's Mill Bridge [BOLL04] still carries local traffic on a gravel-surfaced county road.

The Whitewater River Bridge is one of numerous steel plate through girders functioning in place on Missouri's highway system. Most of these bridges, including this crossing of the Whitewater River, were built in the 1930s, and many are multiple-span examples. Although it ranks among the longest of these, the Whitewater River Bridge is a typical example of a starkly utilitarian design.

NAME(S) OF STRUCTURE

Whitewater River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 663; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City, Missouri; Tenth Biennial Report of the State Highway Commission of Missouri: 1935-36, page 263; field inspection by Richard Collier and Carl McWilliams, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Whitewater River Bridge
MHTD: 032000.5

BOLL04

DATE(S) OF CONSTRUCTION

1913; moved 1936

LOCATION

County Road 32 over Whitewater River; S17, T33N, R10E
3.4 miles northwest of Sedgewickville; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 48)

CONDITION

fair

OWNER

Bollinger County

span number: 1
span length: 170.0'
total length: 173.0'
roadway wdt.: 12.0'

superstructure: steel, 9-panel, pin-connected Parker through truss
substructure: concrete abutments and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with bracing; portal strut: A-frame; floor beam: I-beam, field bolted to vertical; guardrail: timber; portal builder's plate: 1913 / Miller & Borcharding / Contractors / St. Louis Mo. / Stupp Bro's / Bridge & Iron Co. Manufacturers / Jacob A. Taylor Presiding Judge / John Owens Associate Judge / Jon. Sitzes [Associate Judge] / Wm. Abernathy County Clerk / J.W. Reilly Engineer

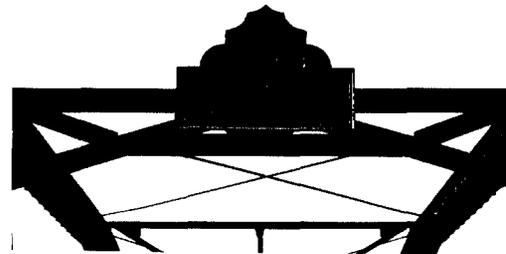
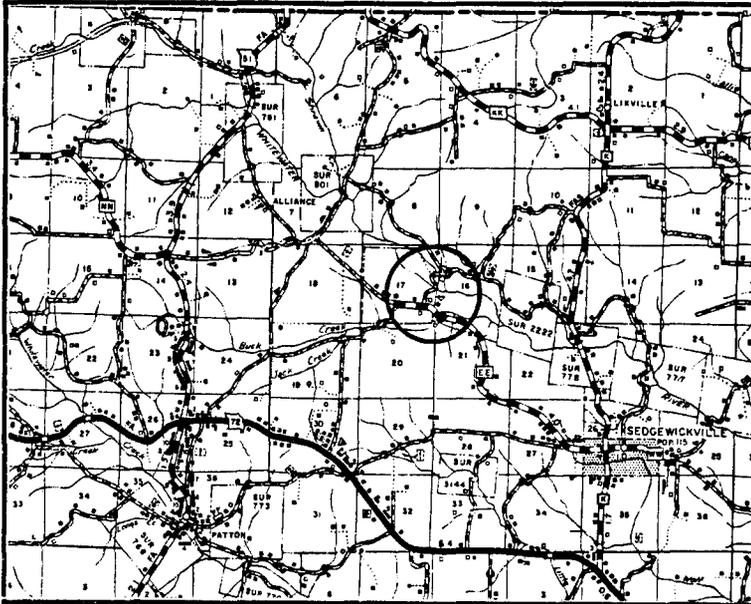
On August 14, 1912, Bollinger County Highway Engineer J.W. Reilly was directed by the county court to survey and make plans and specifications for a steel wagon bridge across the Whitewater River near A.F. Seabaugh's flouring mill. This site was on the main road leading north from Sedgewickville, about 3½ miles outside of town. Reilly reported back to the court in early December, stating that a 171-foot span was needed, and that it would cost an estimated \$3500.00. The county then advertised for bids. On December 27, 1912, Miller and Borcharding of St. Louis received contracts to build the Whitewater River Bridge and three smaller spans for a total price of \$9300.00. At the Whitewater crossing, Miller and Borcharding erected a 170-foot pinned Parker through truss that had been fabricated by the Stupp Brothers Bridge and Iron Company, also of St. Louis. The bridge subsequently carried traffic at that location until the mid-1930s. By that time the road north from Sedgewickville had become a principal north-south route between Bollinger and Perry Counties. Designated as Supplementary Route K, it was carrying increasingly heavy traffic loads, which soon necessitated the replacement of the Whitewater River Bridge with a wider, more modern structure. In the spring of 1936 the old bridge was taken out and replaced with a three-span steel plate through girder structure. With a 22-foot roadway width, the new bridge was ten feet wider than its predecessor and could also withstand far greater loads. This bridge [BOLL03] is still in service today. The old Seabaugh's Mill Bridge was re-erected at a less heavily traveled location about 1½ miles upstream. Exhibiting a high degree of physical integrity, this long span truss has long since developed a sense of time and place at its second location. Still open to local traffic, the bridge appears much the same as when originally built.

Between the early 1880s, when trusses superseded bowstrings, and the 1920s, when field riveting attained widespread use, the pin-connected truss was the structure of choice for medium- and long-span wagon bridges in Missouri. Virtually all of the major Midwestern bridge companies fabricated pinned trusses and marketed them extensively to counties throughout the state in the late 19th and early 20th centuries. This corresponded with a period of intense bridge construction, as the counties were busily upgrading their road and highway systems. As a result, thousands of pinned trusses were built in Missouri during this formative period, and many remain in place today. Most of these featured straight-chorded Pratt configurations. After the turn of the century, however, bridge manufacturers found a greater economy in polygonal-chorded Pratt variants (particularly the Parker truss) for long-span applications. Their relatively long spans, light structural members and archaic detailing have rendered pin-connected Parker trusses particularly vulnerable to subsequent replacement. As a result, of the hundreds that once carried vehicular traffic throughout the state, fewer than three dozen remain in place today. These range in span length from 110 feet to 200 feet and in erection date from 1900 to 1932. The Whitewater River Bridge, with its 170-foot span and 1913 construction date, falls within the mainstream of this trend. Although moved about 1½ miles from its original location, it has retained a high degree of physical integrity, and has now served at its new setting for more than fifty years. The bridge is a well-documented and well-preserved example of a pin-connected Parker through truss - a mainstay design for long span crossings in the years after the turn of the century.

NAME(S) OF STRUCTURE

Whitewater River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 032000.5; Bollinger County Court Record, Book 13: page 363 (14 August 1912), page 408 (3 December 1912), page 411 (27 December 1912), page 527 (23 September 1913) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier and Carl McWilliams, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Perkin's Ford Bridge
MHTD: 099002.5

BOLL07

DATE(S) OF CONSTRUCTION

1917

LOCATION

County Road 99 over Crooked Creek; S15, T30N, R10E
3.3 miles southeast of Lutesville; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / abandoned

RATING NRHP determined non-eligible (score: 34)

CONDITION

fair

OWNER

Bollinger County

span number: 1
span length: 130.0'
total length: 170.0'
roadway wdt.: 11.8'

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; strut: 2 angles, braced; portal strut: A-frame; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles

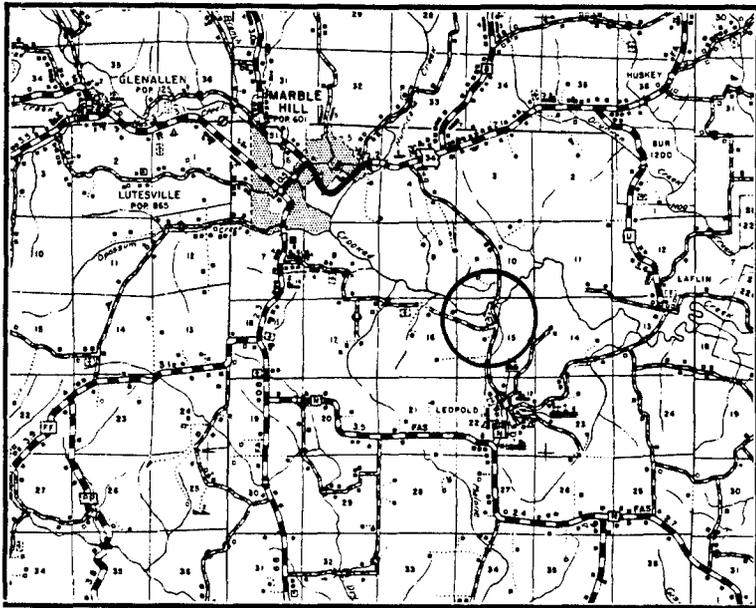
The Perkin's Ford Bridge spans Crooked Creek a little over three miles southeast of Lutesville, in southeast Bollinger County. On August 18, 1917, George Elfrank and other citizens petitioned for a bridge at this location on what was then known as the Marble Hill to Leopold Road. Presenting a subscription of \$803.00 along with their request, the petitioners received a positive response from the county court. The county highway engineer was then directed to view the proposed location, prepare bridge plans, and report back to the court. No subsequent references were recorded in county minutes, but the structure was evidently erected in the fall of 1917. The crossing has recently been closed to traffic, but the truss still appears much the same as when it was originally built.

The Perkin's Ford Bridge is a medium-span example of Pratt through truss construction. Although it has retained its essential elements of historical integrity, the structure's construction history is inadequately documented.

NAME(S) OF STRUCTURE

Perkin's Ford Bridge (Crooked Creek Bridge)

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 099002.5; Bollinger County Court Record, Book 15: page 60 (18 August 1917) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier and Carl McWilliams, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Laflin Bridge
MHTD: 124002.4

BOLL09

DATE(S) OF CONSTRUCTION

1908

LOCATION

County Road 124 over Crooked Creek; S13, T30N, R10E
0.4 mile south of Laflin; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 46)

CONDITION

fair

OWNER

Bollinger County

span number: 1
span length: 120.0'
total length: 285.0'
roadway wdt.: 12.0'

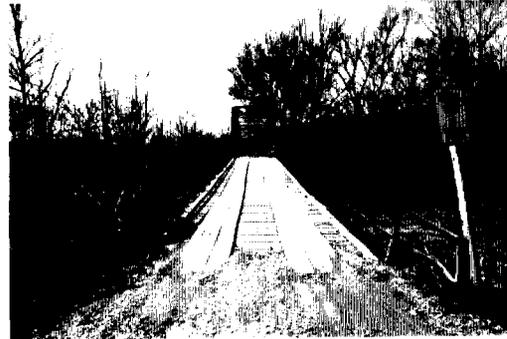
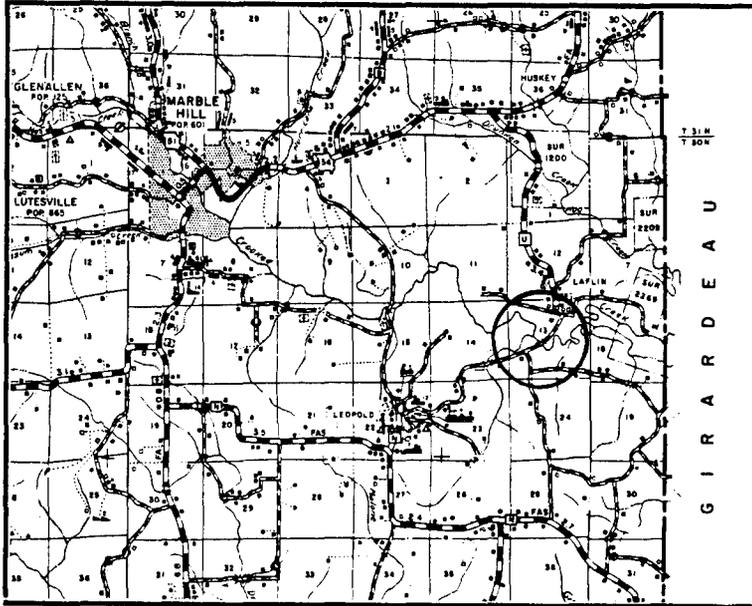
superstructure: steel, 7-panel, pin-connected Pratt through truss, with 3 steel stringer approach spans at the north end and 2 steel stringer approach spans at the south end
substructure: steel pile bent abutments below grade; concrete-filled steel cylinder piers under main span, concrete piers under approach spans
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: timber on main span, steel angle on approach spans; portal builder's plate: 1908 / Stupp Bro's Bridge & Iron Co / F.M. Wells Pres Judge / M.S. Gladish Associate Judge / H. Muncle Associate Judge / W.M. Abernathy County Clerk / D.R. Sample Co. Surveyor

At a meeting held on August 20, 1907, the Bollinger County Court ordered two wagon bridges built: one between Marble Hill and Lutesville and another across Crooked Creek just south of Laflin. County Surveyor Dennis Sample surveyed the two bridge sites and estimated the structures' cost, but it was not until the following February that he reported back to the county court. Sample estimated the cost of the Laflin Bridge at \$3000.00, and the court directed him to advertise for bids in the **Marble Hill Press**. A contract for the structure's erection was let by public outcry on April 17, 1908, with the winning bid having been submitted by the Stupp Brothers Bridge and Iron Company of St. Louis. The contract was signed on May 16th, with funds to pay for the bridge designated to come from "the War Debt Fund, the Improvement of Roads Fund, and a new fund titled "Bridge Across Crooked Creek Near Laflin, Missouri, Fund." In May 1928, twenty years after it was erected, the bridge needed to be repaired. New guardrails and floor planks were installed, and some of the bridge's stringers were replaced with in-kind materials. Timber pile bents under the approach spans were also replaced with concrete piers. Exhibiting an above-average degree of historical integrity, the Laflin Bridge is a well-documented example of a mainstay structural type: the pin-connected Pratt through truss.

NAME(S) OF STRUCTURE

Laflin Bridge (Crooked Creek Bridge)

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 124002.4; Bollinger County Court Record, Book 11: page 423 (20 August 1907), page 506 (19 February 1908), page 527 (17 April 1908), pages 561-62 (16 May 1908); Book 12: pages 42-43 (22 October 1908), page 60 (11 November 1908); Book 17: page 471 (8 May 1928) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier and Carl McWilliams, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Clubb Creek Bridge
MHTD: 160002.0

BOLL11

DATE(S) OF CONSTRUCTION

1908; moved 1927

LOCATION

County Road 160 over Clubb Creek; S14/23, T29N, R9E
3.1 miles northeast of Zalma; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION

good

OWNER

Bollinger County

span number: 1
span length: 38.0'
total length: 38.0'
roadway wdt.: 12.0'

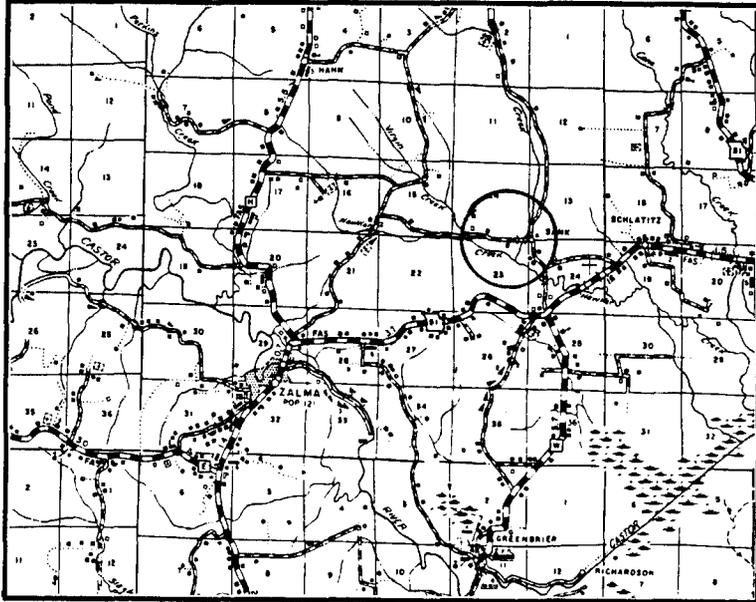
superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: cut-off bedstead legs set in concrete abutments
floor/decking: timber deck over steel stringers
other features: upper chord and upright end post: 2 channels with batten plates; lower chord: 2 angles with batten plates, 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars, 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

The Clubb Creek Bridge is a modest Pratt truss-leg bedstead, located some three miles northeast of Zalma, in south-central Bollinger County. The structure's history dates to the late fall of 1908. On December 8th of that year county road overseer J.M. Zimmerman presented plans and specifications for a bridge across a slough near the residence of L.B. James at Zalma. The county court initially disapproved of Zimmerman's report, but whatever the problems were, they were evidently soon ameliorated. On December 31st a \$950.00 contract to build this small-scale steel bridge was awarded to the Stupp Brothers Bridge and Iron Company of St. Louis. On February 9, 1909, the structure was declared completed. The bridge served at its original location for approximately twenty years. In the fall of 1927 the structure was re-erected over Clubb Creek, three miles north of Zalma. Appearing much the same as when originally built, the bridge continues to carry traffic at this location.

Exhibiting below-average physical integrity, the Clubb Creek Bridge is an undistinguished example of a Pratt truss-leg bedstead. Built in large numbers in the years surrounding the turn of the century, there are hundreds such bridges remaining in use on Missouri's roadways.

NAME(S) OF STRUCTURE

Clubb Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 160002.0; Bollinger County Court Record, Book 11: page 423 (3 September 1907), page 470 (10 February 1908), pages 536-37 (12 May 1908), page 604 (29 May 1908), page 613 (23 July 1908); Book 12: pages 28-29 (9 September 1908), page 36 (15 October 1908), page 78 (14 November 1908), pages 92-93 (31 December 1908), page 110 (9 February 1909); Book 17: page 42 (7 December 1925), page 138 (9 August 1926), page 309 (3 August 1927), pages 315-16 (22 August 1927), page 331 (10 September 1927) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Fish Trap Ford Bridge
MHTD: 203002.8

BOLL15

DATE(S) OF CONSTRUCTION

1911-12; moved 1927-28

LOCATION

County Road 203 over Castor River; S28, T29N, R8E
0.7 mile north of Gipsy; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION

fair

OWNER

Bollinger County

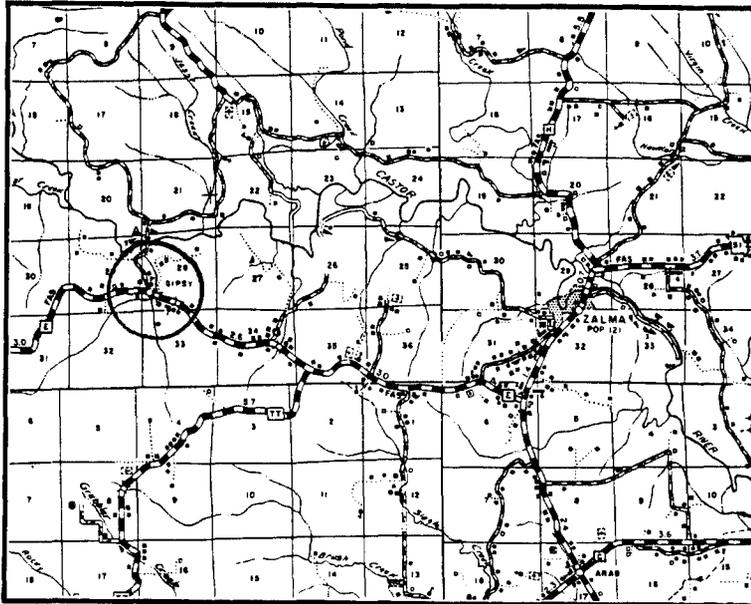
span number: 1
span length: 112.0'
total length: 222.0'
roadway wdt.: 11.5'

superstructure: steel, 7-panel, pin-connected Pratt through truss, with pin-connected Pratt pony truss and steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers under main span and pony approach; timber pile bent piers under steel stringer approach spans
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars (2 punched rectangular eyebars on pony approach span); counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 1 channel (2 angles on pony approach span)

The Fish Trap Ford Bridge carries a secondary county road over the Castor River slightly less than a mile north of the small town of Gipsy, in southwestern Bollinger County. A steel, pin-connected Pratt through truss, the structure is flanked on its north end by a pinned Pratt pony truss and four steel stringer approach spans. Efforts to build the bridge began in the spring of 1911. In May of that year the Bollinger County Court directed county engineer J.W. Reilly to view the Castor River at Greenbrier for a bridge site. On the basis of Reilly's report in August, the court decided to advertise for bids. The only proposal that the county received was from the Stupp Brothers Bridge and Iron Company of St. Louis. This firm was awarded the contract on September 8th for \$2000.00. On February 12, 1912, the bridge was declared completed, and Stupp Brothers was issued a warrant for their work. Known as the Greenbrier Bridge, the structure carried traffic at its original location until the autumn of 1927. On September 30, 1927, the Missouri Bridge and Iron Company was awarded a contract to re-erect the Greenbrier Bridge at Fish Trap Ford, north of Gipsy, with a pony truss approach span. Here it remains, still in use by local residents. Having long since acquired a sense of time and place at its current location north of Gipsy, the Fish Trap Ford Bridge is a well-preserved and well-documented example of a mainstay structural type: the Pratt through truss.

NAME(S) OF STRUCTURE
Fish Trap Ford Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 203002.8; Bollinger County Court Record, Book 13: page 73 (13 May 1911), page 130 (22 May 1911), page 155 (17 August 1911), pages 166-67 (8 September 1911), page 231 (7 February 1912); Book 17: page 20 (10 September 1925), page 42 (7 December 1925), page 138 (9 August 1926), page 309 (3 August 1927), pages 315-16 (22 August 1927), page 331 (10 September 1927), page 337 (30 September 1927), page 401 (5 March 1928) - located at Bollinger County Courthouse, Marble Hill MO; field inspection by Richard Collier, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Gipsy Bridge
MHTD: 203003.1

BOLL16

DATE(S) OF CONSTRUCTION

1900; moved 1936

LOCATION

County Road 203 over Lick Log Creek; S28, T29N, R8E
0.5 mile north of Gipsy; Bollinger County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION

good

OWNER

Bollinger County

span number: 1
span length: 117.0'
total length: 117.0'
roadway wdt.: 11.8'

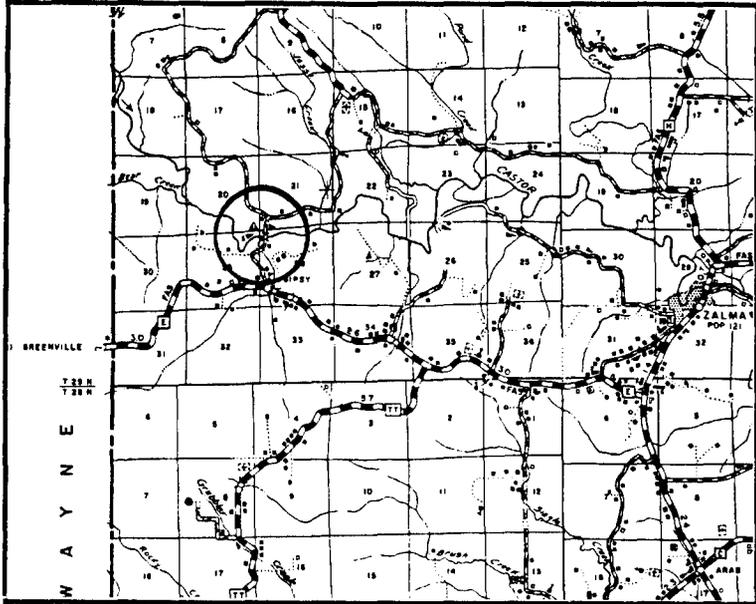
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: timber

The Gipsy Bridge is a seven-panel, pin-connected Pratt through truss that carries a gravel-surfaced county road over Lick Log Creek ½ mile north of the small town of Gipsy. Built in early 1900, the structure is Bollinger County's oldest remaining vehicular truss. On November 18, 1899, the Bollinger County Court directed county road and bridge commissioner J.W. Reilly to prepare plans and specifications for a bridge across the Castor River at Zalma. Bids were solicited, and in December a \$1700.00 contract for the structure was let to Stupp Brothers Bridge and Iron Company of St. Louis. The contract with Stupp Brothers initially called for a 100-foot truss with a 12-foot roadway, supported by 36-inch caissons filled with Louisville cement. In early February 1900 it was decided the bridge needed to be 17 feet longer, and its price was increased by a corresponding \$275.00. (This brought Stupp Brothers' contract to \$1975.00, in addition to which local contractor J.V. Slinkard was paid \$150.00 to grade the approaches.) By mid-May the Zalma Bridge was completed. In a report to the Bollinger County Court on May 14th, Reilly stated that he had inspected the new structure, and that he found it built "according to contract in every particular." By August, Slinkard had completed the approaches, and the bridge was opened for travel. The structure functioned in place until its replacement with another span [BOLL02] in 1930. That year the truss was dismantled and re-erected on a new concrete substructure at a crossing of Lick Log Creek just north of Gipsy. Subsequently known as the Gipsy Bridge, it has carried local traffic in its southwestern Bollinger County location since that time. The Gipsy Bridge is a structurally intact, well-documented example of a pin-connected Pratt through truss.

NAME(S) OF STRUCTURE

Gipsy Bridge (Lick Log Creek Bridge)

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 203003.1; Bollinger County Court Record 9: page 374 (18 November 1899), page 379 (December 1899), page 388 (12 February 1900), page 416 (14 May 1900), page 430 (18 May 1900), page 483 (13 August 1900), page 488 (14 August 1900); field inspection by Richard Collier and Carl McWilliams, 26 March 1992.

INVENTORIED BY

Clayton Fraser and Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

15 April 1992

BUTLER COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
*BUTL01	K 263R	Poplar Bluff Viaduct	1-130' riveted Warren deck truss 1934 Regenhardt Construction Co.
*BUTL02	008000.4	Cane Creek Bridge	1- 40' rivet Pratt/Warren pony truss c1915 Miller & Borcharding, St.Louis
*BUTL03	014001.2	Smith Bridge	1- 76' rivet Pratt/Warren pony truss 1916 Miller & Borcharding, St.Louis
*BUTL04	049002.2	Bridge	2- 12' stone arch culvert c1920
*BUTL05	049002.3	Bridge	2- 12' stone arch culvert c1920
*BUTL06	159000.3	Hargrove Bridge	2- 50' Pratt/Warren pony swing span 1917 Miller & Borcharding, St.Louis
*BUTL07	169000.7	Bridge	1- 54' rivet Pratt/Warren pony truss 1930 county work force
*BUTL08	372000.0	Roxie Road Bridge	1- 90' pinned Pratt through truss 1906 Stupp Bros. Bridge & Iron Co.
*BUTL09	399002.7	Miller Bridge	1-120' pinned Pratt through truss 1901 Interstate Bridge Company
*BUTL10	412A00.2	Ten Mile Creek Bridge	1- 40' rivet Pratt/Warren pony truss c1915 Miller & Borcharding [prob.]
*BUTL11	416000.4	Pike Creek Bridge	1- 40' rivet Pratt/Warren pony truss 1915 Miller & Borcharding, St.Louis
*BUTL12	428000.3	Hendrickson Bridge	2-200' riveted Parker through truss 1933 Service Construction Co.

EXCLUDED:

Pratt pony truss
404001.6

Warren pony truss
G 852

Steel stringer

F 663R	F 664R	F 665R	G 276R	G 277R	G 278R	G 280R
J 92R2	J 386R	P 31	P 32	S 235	S 236	S 523
S 524	S 525	S 526	S 565	T 168	T 170	X 537
X 789	X 790	X 791	003001.3	008002.3	018001.3	021003.3
022001.7	067002.0	084001.0	087000.3	091000.0	101000.0	105002.5
106001.7	137001.0	146001.6	158001.3	159001.3	168000.3	168000.9
173003.2	197A04.3	198000.3	243001.0	260000.5	294002.5	302001.2
307000.9	307001.0	307001.6	350000.3	369000.4	427000.5	428000.4

BUTLER COUNTY

EXCLUDED (cont.):

Steel girder
T 169

Concrete girder
G 359 H 179 022001.7 339000.5 428000.2

Concrete slab
G 279R G 293R G 294R H 175 H 176 H 180 K 982
K 983 L 356 L 372 049000.0

Concrete box culvert
A4684 K 20 K 459R S 630R1 W 191

Timber stringer
104A00.8 107001.7 137001.3 167000.7 171000.5 173A00.0 179001.0
181A00.2
197A02.5 218R01.4 246A00.0 257000.7 436000.4 85A000.2

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	11	0	0	12
Excluded	43	50	0	0	93
	<hr/>				
	44	61	0	0	105 structures

Poplar Bluff Viaduct

BUTL01

GENERAL DATA

structure no.:	K 263R	city/town:	Poplar Bluff
county:	Butler	feature inters.:	Black River and Missouri and Pacific Railroad
		cadastral grid:	S2, T24N, R6E
		highway route:	Missouri State Highway 60 (Business Route)
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 6-panel, rigid-connected Warren deck truss with steel stringer approach spans		
substructure:	concrete abutments, wingwalls and piers		
span number:	1	condition:	excellent
span length:	130.0'	alterations:	repairs in 1986
total length:	399.0'	floor/decking :	asphalt over concrete deck with steel stringers
roadway width:	32.0'	other features:	upper chord / end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: wide flange; diagonal: 2 channels with double lacing; lateral bracing: angle; stringer: transverse I-beams; concrete guardrail with open balustrade; 4 lampposts on north guardrail; bridge plate: Missouri Highway Dept Bridge N ^o K263 1934

HISTORICAL DATA

erection date:	1934
erection cost:	\$58,650.41
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Regenhardt Construction Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 263R; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson City, Missouri; Ninth Biennial Report of the State Highway Commission of Missouri (1933-34), pages 106, 183-191; field inspection by Richard Collier, 30 March 1992.
sign. rating:	63
evaluation:	NRHP possibly eligible (well-preserved example of an uncommon structural type, used for an urban viaduct)

inventoried by: Clayton B. Fraser 17 April 1992

Cane Creek Bridge

BUTL02

GENERAL DATA

structure no.: 008000.4	city/town: 7.1 miles west of Hendrickson
county: Butler	feature inters.: Cane Creek
	cadastral grid: S23, T26N, R4E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt/Warren pony truss
substructure: concrete abutments and wingwalls with concrete spill-through piers

span number: 1	condition: fair
span length: 40.0'	alterations: truss moved or substructure replaced
total length: 100.0'	floor/decking : timber deck over steel stringers
roadway width: 11.0'	other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: channel; diagonal: channel; lateral bracing: round rod with threaded ends; floor beam: I-beam field bolted to lower chord; guardrail: none on main truss, 2 angles on approach spans

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: Miller and Borcharding, St. Louis MO
fabricator : Lackawanna Steel Company, Pittsburgh PA
contractor: Miller and Borcharding, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 008000.4; field inspection by Richard Collier, 29 March 1992.

sign. rating: 37
evaluation: NRHP non-eligible (an example of an uncommon structural type, but lacking in documentation and probably moved to this location)

inventoried by: Clayton B. Fraser 17 April 1992

Smith Bridge

BUTL03

GENERAL DATA

structure no.: 014001.2	city/town: 5.7 miles southwest of Hendrickson
county: Butler	feature inters.: Cane Creek
	cadastral grid: S31, T26N, R5E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected Pratt/Warren pony truss with steel stringer approach spans	
substructure: concrete abutments and wingwalls with concrete-filled steel cylinder piers	
span number: 1	condition: fair
span length: 76.0'	alterations: truss moved in 1924
total length: 122.0'	floor/decking : timber deck over steel stringers
roadway width: 10.9'	other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: 2 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: none on main truss, 2 angles on approach spans

HISTORICAL DATA

erection date: 1916; moved 1924	
erection cost: \$14,815 (multiple-bridge contract)	
designer: Miller and Borcharding, St. Louis MO	
fabricator : Illinois Steel Company, Chicago IL	
contractor: Miller and Borcharding, St. Louis MO	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 014001.2; Butler County Court Record T: page 436 (11 January 1916), page 527 (30 June 1916), page 551 (1 September 1916), page 567 (16 October 1916), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 29 March 1992.	
sign. rating: 50	
evaluation: NRHP possibly eligible (well-preserved, well-documented example of proprietary truss type, exceeded in span length by only one other of its type)	

Inventoried by: Clayton B. Fraser 17 April 1992

Culvert

BUTL04

GENERAL DATA

structure no.: 049002.2	city/town: 1.4 miles southwest of Rombauer
county: Butler	feature inters.: unnamed stream
	cadastral grid: S10, T25N, R7E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: stone arch culvert	
substructure: stone abutments and pier	
span number: 2	condition: good
span length: 12.0'	alterations: none
total length: 28.0'	floor/decking : concrete deck over earth fill
roadway width: 18.7'	other features: stone rubble sidewalls; concrete parging on inside of barrels; low stone parapets at roadway

HISTORICAL DATA

erection date: c1920	
erection cost: unknown	
designer: unknown	
fabricator : none	
contractor: unknown	
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 049002.2; field inspection by Richard Collier, 28 March 1992.
sign. rating: 30	
evaluation:	NRHP non-eligible (largely undocumented, technologically undistinguished culvert)

inventoried by: Clayton B. Fraser 17 April 1992

Culvert

BUTL05

GENERAL DATA

structure no.: 049002.3	city/town: 1.5 miles southwest of Rombauer
county: Butler	feature inters.: unnamed stream
	cadastral grid: S10, T25N, R7E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: stone arch culvert	
substructure: stone abutments and pier	
span number: 2	condition: good
span length: 12.0'	alterations: none
total length: 26.0'	floor/decking : concrete deck over earth fill
roadway width: 18.3'	other features: stone rubble sidewalls; concrete parging on inside of barrels; low stone parapets at roadway

HISTORICAL DATA

erection date: c1920	
erection cost: unknown	
designer: unknown	
fabricator : none	
contractor: unknown	
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 049002.3; field inspection by Richard Collier, 28 March 1992.
sign. rating: 30	
evaluation:	NRHP non-eligible (largely undocumented, technologically undistinguished culvert)

inventoried by: Clayton B. Fraser 17 April 1992

Hargrove Bridge

BUTL06

GENERAL DATA

structure no.:	159000.3	city/town:	4.5 miles northwest of Qulin
county:	Butler	feature inters.:	Black River
		cadastral grid:	S9, T23N, R7E
		highway route:	county road
		highway distr.:	10
		current owner:	Butler County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected, Pratt/Warren pony truss swing span, with steel stringer approach spans at each end

substructure: timber abutments and wingwalls; timber pile bent piers under approach spans; concrete-filled steel cylinder piers under main span, with concrete-filled steel cylinder oval pier under center pivot

span number:	2	condition:	good
span length:	50.0'	alterations:	none
total length:	220.0'	floor/decking :	timber deck over steel stringers
roadway width:	16.2'	other features:	upper chord and inclined end post: I-beam; lower chord: 2 channels with lacing; vertical: channel; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam; guard-rail: steel angle; pivot apparatus: 2 channel verticals with lacing, 2 angle diagonals with batten plates, 4 angle strut with lacing, heavy timbers supporting verticals at center, shaft for crank handle extends through deck at mid-span

HISTORICAL DATA

erection date: 1916-17

erection cost: \$14,815.00 (multiple-bridge contract)

designer: Miller and Borcharding, St. Louis MO

fabricator : Illinois Steel Company, Chicago IL

contractor: Miller and Borcharding, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 159000.3; Butler County Court Record T: page 501 (1 May 1916), page 551 (1 September 1916), page 567 (16 October 1916), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

sign. rating: 78

evaluation: NRHP individually listed, 1985 (well-documented, well-preserved, unique example of small-scale movable truss)

inventoried by: Clayton B. Fraser 17 April 1992

Bridge

BUTL07

GENERAL DATA

structure no.: 169000.7	city/town: 1.9 miles northwest of Qulin
county: Butler	feature inters.: Drainage Ditch No. 16
	cadastral grid: S23/24, T23N, R7E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt/Warren pony truss with steel stringer approach spans	
substructure: timber pile bent abutments and piers	
span number: 1	condition: fair
span length: 54.0'	alterations: none
total length: 102.0'	floor/decking : timber deck over steel stringers
roadway width: 11.1'	other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: channel; diagonal: channel; lateral bracing: round rod with threaded ends; floor beam: I-beam field bolted to lower chord; guardrail: 2 angles

HISTORICAL DATA

erection date: 1930	
erection cost: unknown	
designer: R.L. Miller, St. Louis MO (probable)	
fabricator : Scullen Steel Company	
contractor: county work force	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 169000.7; Butler County Court Record Z: page 268 (4 August 1930), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.	
sign. rating: 40	
evaluation: NRHP non-eligible (an undistinguished example of an uncommon structural type)	

Inventoried by: Clayton B. Fraser 17 April 1992

Roxie Road Bridge

BUTL08

GENERAL DATA

structure no.: 372000.0	city/town: 3.7 miles southeast of Stringtown
county: Butler	feature inters.: Cane Creek
	cadastral grid: S10, T24N, R5E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss with steel stringer approach spans

substructure: concrete abutments and wingwalls; concrete-filled steel cylinder pier between main span and northwest approach; concrete pier between southeast approach spans

span number: 1	condition: good
span length: 90.0'	alterations: concrete pier added under approach spans
total length: 138.0'	floor/decking : timber deck over steel stringers
roadway width: 10.8'	other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eye bars at the hip); diagonal: 2 looped rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; portal strut: angle A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1906
erection cost: \$1700.00
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO;
Cambria Steel Company, Pittsburgh PA
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 372000.0; Butler County Court Record N: page 625 (5 September 1905), page 631 (October 1905); Butler County Court Record P: page 6 (7 November 1905); Butler County Court Record V: page 119 (4 August 1920), page 499 (28 June 1921), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

Roxie Road Bridge

sign. rating: 39

evaluation: NRHP non-eligible (typical example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity)

inventoried by: Clayton B. Fraser 17 April 1992

Miller Bridge

BUTL09

GENERAL DATA

structure no.:	399002.7	city/town:	2.8 miles east of Stringtown
county:	Butler	feature inters.:	Cane Creek
		cadastral grid:	S4, T24N, R5E
		highway route:	county road
		highway distr.:	10
		current owner:	Butler County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: timber abutments; concrete-filled steel cylinder piers under main span; timber pile bent piers under approach spans

span number:	1	condition:	fair
span length:	100.0'	alterations:	none
total length:	156.0'	floor/decking :	timber deck over steel stringers
roadway width:	13.0'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars (inner panels), channel (outer panels); vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; floor beam: I-beam, field-bolted to vertical

HISTORICAL DATA

erection date: 1901
erection cost: \$2300.00
designer: unknown
fabricator : unknown
contractor: Interstate Bridge Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 399002.7; Butler County Court Record N: page 53 (6 August 1902), page 57 (1 September 1902), page 60 (1 September 1902), page 118 (29 December 1902), page 124 (31 December 1902), page 130 (31 December 1902), page 176 (1 April 1903), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

sign. rating: 39
evaluation: NRHP determined non-eligible (typical example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity)

inventoried by: Clayton B. Fraser 17 April 1992

Ten Mile Creek Bridge

BUTL10

GENERAL DATA

structure no.: 412A00.2	city/town: 5.0 miles north of Stringtown
county: Butler	feature inters.: Ten Mile Creek
	cadastral grid: S15, T25N, R4E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt/Warren pony truss with timber and steel stringer approach spans	
substructure: timber pile bent abutments and piers	
span number: 1	condition: fair
span length: 40.0'	alterations: none
total length: 90.0'	floor/decking : timber deck over steel stringers
roadway width: 10.9'	other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: channel; diagonal: channel; floor beam: I-beam; guardrail: none on main truss, 2 angles on approach spans

HISTORICAL DATA

erection date: c1920	
erection cost: unknown	
designer: Miller and Borcharding, St. Louis (probable)	
fabricator : Cambria Steel Company, Pittsburgh PA	
contractor : Miller and Borcharding, St. Louis (probable)	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 412A00.2; field inspection by Richard Collier, 29 March 1992.	
sign. rating: 37	
evaluation: NRHP non-eligible (an example of an uncommon structural type, but lacking in documentation)	

inventoried by: Clayton B. Fraser 17 April 1992

Pike Creek Bridge

BUTL11

GENERAL DATA

structure no.: 416000.4	city/town: 1.0 mile south of Poplar Bluff
county: Butler	feature inters.: Pike Creek
	cadastral grid: S15, T24N, R6E
	highway route: county road
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt/Warren pony truss
substructure: concrete abutments and wingwalls

span number: 1	condition: fair
span length: 40.0'	alterations: none
total length: 40.0'	floor/decking : timber deck over steel stringers
roadway width: 11.0'	other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: channel; diagonal: channel; lateral bracing: round rod with threaded ends; floor beam: I-beam field bolted to lower chord; guardrail: 2 angles

HISTORICAL DATA

erection date: 1915
erection cost: unknown
designer: Miller and Borcharding, St. Louis MO (probable)
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: Miller and Borcharding, St. Louis MO (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 416000.4; Butler County Court Record O: page 261 (2 November 1914), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

sign. rating: 49
evaluation: NRHP possibly eligible (well-preserved example of uncommon truss configuration)

inventoried by: Clayton B. Fraser 17 April 1992

Hendrickson Bridge

BUTL12

GENERAL DATA

structure no.: 428000.3	city/town: 0.3 mile west of Hendrickson
county: Butler	feature inters.: Black River
	cadastral grid: S13, T26N, R5E
	highway route: old U.S. Highway 67
	highway distr.: 10
	current owner: Butler County

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected Parker through truss with steel stringer approach spans	
substructure: concrete abutments, wingwalls and piers	
span number: 1; 1	condition: good
span length: 200.0'; 160.0'	alterations: one truss replaced with steel stringer spans
total length: 526.0'	floor/decking : concrete deck over steel stringers
roadway width: 22.0'	other features: steel angle guardrail

HISTORICAL DATA

erection date: 1933	
erection cost: \$52,977.28	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: Service Construction Company	
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 428000.3; Butler County Court Record P: page 336 (4 February 1908), page 402 (2 September 1908), page 411 (5 October 1908); Butler County Court Record T: page 394 (1 September 1915), located at Butler County Courthouse, Poplar Bluff, Missouri; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson City MO; field inspection by Richard Collier, 28 March 1992.
sign. rating: 45	
evaluation:	NRHP non-eligible (long-span example of MSHD standard truss design, significantly altered)

inventoried by: Clayton B. Fraser 17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Poplar Bluff Viaduct
MHTD: K 263R

BUTL01

DATE(S) OF CONSTRUCTION

1934

LOCATION

State Highway 60 over Black River and MoPac Railroad; S2, T24N, R6E
Poplar Bluff; Butler County, Missouri

USE (ORIGINAL / CURRENT)

urban viaduct / urban viaduct

RATING NRHP possibly eligible (score: 63)

CONDITION

excellent

OWNER

Missouri Highway and Transportation Department

span number: 1
span length: 130.0'
total length: 399.0'
roadway wdt.: 32.0'

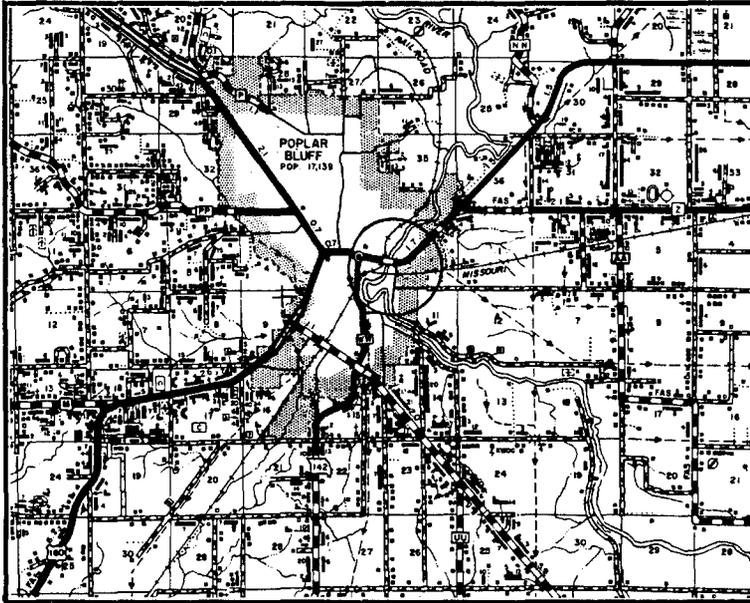
superstructure: steel, 6-panel, rigid-connected Warren deck truss with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers
floor/decking: asphalt over concrete deck with steel stringers
other features: upper chord / end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: wide flange; diagonal: 2 channels with double lacing; lateral bracing: angle; stringer: transverse I-beams; concrete guardrail with open balustrade; 4 lampposts on north guardrail; bridge plate: **Missouri Highway Dept Bridge N^o K263 1934**

As part of the effort to create jobs during the Depression, Congress in 1934 passed an act allowing federal monies to be used for road and bridge construction within municipalities. Taking advantage of the new legislation, the Missouri State Highway Commission undertook a number of urban road and bridge projects that year. Located on the eastern edge of Poplar Bluff on U.S. Business Route 60, the Black River Bridge was one such construction project. To span the river as well as two sets of tracks of the Missouri Pacific Railroad, the highway department engineered a 130-foot Warren deck truss, flanked on both sides by seven steel stringer approach spans. On June 16, 1934, a \$58,650.41 contract for the structure's construction was awarded to the Regenhardt Construction Company. Completed later that year, the Poplar Bluff Viaduct has since carried increasingly heavy traffic loads on the principal highway leading into the city from the east. In recent years, the structure has carried only westbound U.S. 60 traffic, while a newer bridge (**Structure No. A 3266**) carries the highway's eastbound lanes.

As an important crossing of the Black River and MoPac Railroad, the Poplar Bluff Viaduct has formed an integral part of the city's street system. The viaduct is also important as one of the railroad separation projects funded through the New Deal's Hayden-Cartwright Act. Federal relief programs of the 1930s broke with past practice by allowing federal funds to be used for urban, as well as rural highways. Grade separation was a major focus of the highway department during this period, requiring commitment of much staff time. The Poplar Bluff Viaduct is technologically distinguished as a rare example of its type. Steel deck trusses have never been common in Missouri (less than ten have been identified by the inventory), nor have multiple-span urban viaducts. The Poplar Bluff combines the two structural types. A well-preserved, regionally important example of these two bridge types, the structure is both technologically and historically significant.

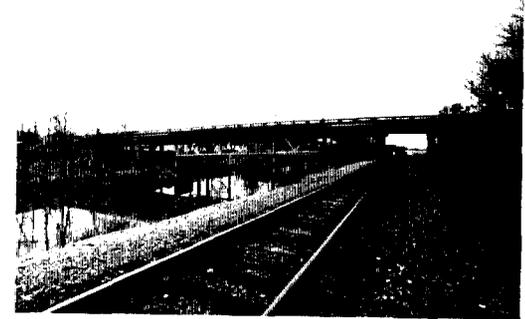
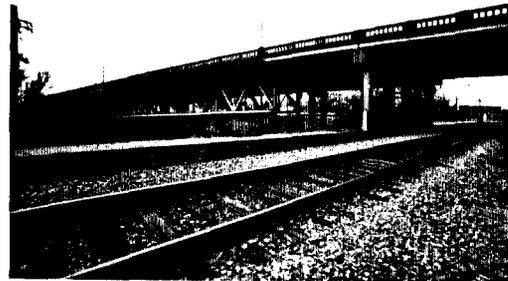
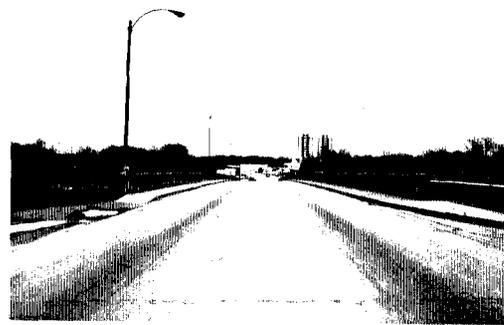
NAME(S) OF STRUCTURE
Poplar Bluff Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP



SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 263R; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson City, Missouri; **Ninth Biennial Report of the State Highway Commission of Missouri (1933-34)**, pages 106, 183-191; field inspection by Richard Collier, 30 March 1992.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Smith Bridge
MHTD: 014001.2

BUTL03

DATE(S) OF CONSTRUCTION

1916; moved 1924

LOCATION

county road over Cane Creek; S31, T26N, R5E
5.7 miles southwest of Hendrickson; Butler County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP potentially eligible (score: 50)

CONDITION

fair

OWNER

Butler County

span number:	1	superstructure:	steel, 4-panel, rigid-connected Pratt/Warren pony truss with steel stringer approach spans
span length:	76.0'	substructure:	concrete abutments and wingwalls with concrete-filled steel cylinder piers
total length:	122.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	10.9'	other features:	upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: 2 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: none on main truss, 2 angles on approach spans

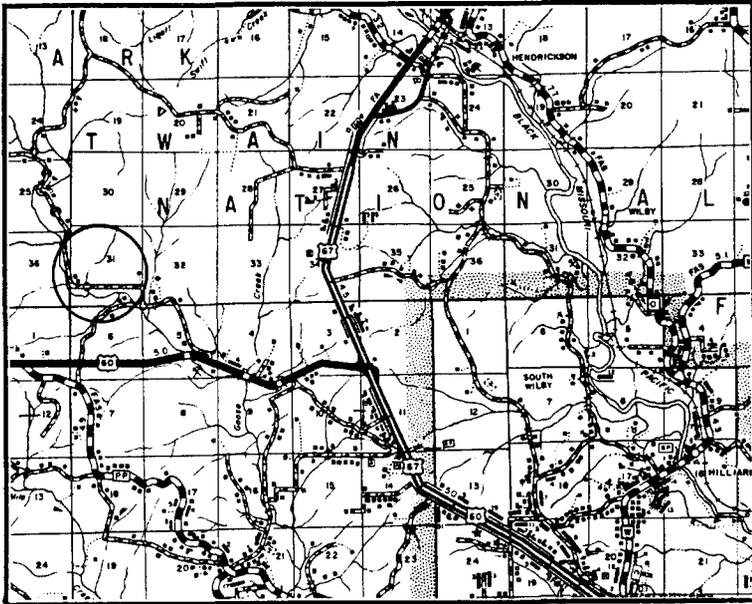
On June 30, 1916, the Butler County Court ordered the county highway engineer to prepare plans and estimate the cost of building several steel bridges throughout the county. Among these was a bridge to be built across Cane Creek on the lower Van Buren Road, some six miles northwest of Poplar Bluff. Two months later contracts for six of the bridges, including the Cane Creek crossing, were let to Miller and Borcharding of St. Louis. Known locally as the Kearbey Bridge - apparently named for an adjacent landowner - the structure was completed late that fall. It stood in its original location for just eight years. In August 1924 O.L. Smith and others petitioned the county court for another bridge across Cane Creek, four miles upstream from the Kearbey crossing. Instead of building an all-new structure, the court ordered the county highway engineer to dismantle the existing Kearbey Bridge and re-erect the truss on steel cylinder piers at the newly proposed bridge site. Located some 5½ miles southwest of Hendrickson, this medium-span truss has carried local traffic since, without alteration.

The rigid-connected truss configuration that Miller and Borcharding used for the Kearbey Bridge features an unusual combination of Warren and Pratt elements. The diagonals and verticals function like a Warren web, using simple triangulation for structural strength, but the end posts are sloped shallowly like a Pratt. A number of these bridges were built in Butler County between circa 1915 and 1930, and six remain in use today. Additionally, ten other such Pratt/Warren pony trusses have been identified in other counties - all located in southeast or central Missouri and virtually all attributable to Miller and/or Borcharding. (The firm's two principals, R.L. Miller and Louis Borcharding, split from each other in 1917.) The Kearbey/Smith Bridge is distinguished as a well-preserved, well-documented example of this proprietary truss type; it is exceeded in span length by only one other such truss. Its subsequent move has diminished its integrity somewhat.

NAME(S) OF STRUCTURE

Smith Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 014001.2; Butler County Court Record T: page 436 (11 January 1916), page 527 (30 June 1916), page 551 (1 September 1916), page 567 (16 October 1916), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 29 March 1992.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Hargrove Bridge
MHTD: 159000.3

BUTL06

DATE(S) OF CONSTRUCTION

1916-17

LOCATION

county road over Black River; S9, T23N, R7E
4.5 miles northwest of Qulin; Butler County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP individually listed, 1985 (score: 78)

CONDITION

good

OWNER

Butler County

span number: 2
span length: 50.0'
total length: 220.0'
roadway wdt.: 16.2'

superstructure: steel, 3-panel, rigid-connected, Pratt/Warren pony truss swing span, with steel stringer approach spans at each end
substructure: timber abutments and wingwalls; timber pile bent piers under approach spans; concrete-filled steel cylinder piers under main span, with concrete-filled steel cylinder oval pier under center pivot
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: I-beam; lower chord: 2 channels with lacing; vertical: channel; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: steel angle; pivot apparatus: 2 channel verticals with lacing, 2 angle diagonals with batten plates, 4 angle strut with lacing, heavy timbers supporting verticals at center, shaft for crank handle extends through deck at mid-span

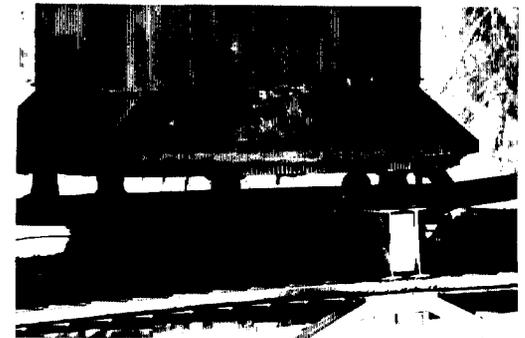
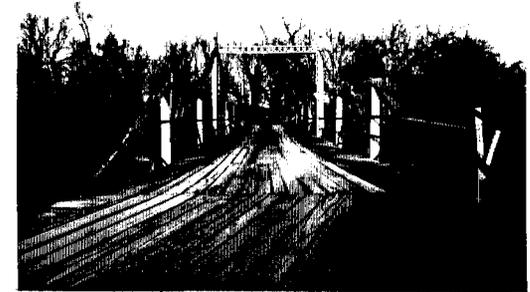
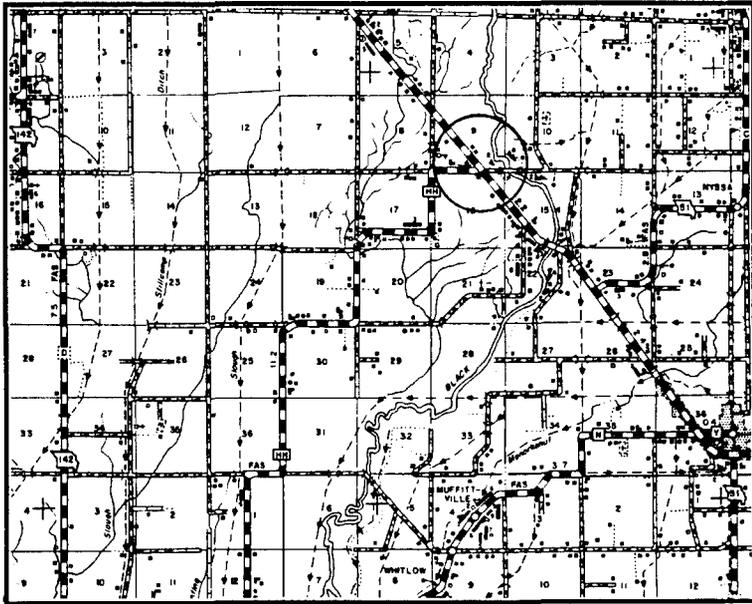
Among the most interesting bridges included in Missouri's historic bridge inventory is this pony truss swing bridge, spanning the Black River some 4½ miles northwest of Qulin. In May 1916 the Butler County Court directed County Highway Engineer E.C. Nickey to prepare plans for a bridge across the Black River at the Hargrove and Ruth farm in Ash Hill Township. Because the Black River was considered a navigable watercourse, Nickey submitted the plans to the U.S. War Department for approval. The river was primarily used for transport by logging operations located upstream in the Missouri Ozarks. Thus, to facilitate river traffic and the movement of logs downstream, it was decided that a swing or pivot span was needed at the Black River crossing. On September 1, 1916, Miller and Borcharding of St. Louis were awarded a \$14,815.00 contract to design, fabricate and erect the Hargrove Bridge, along with five smaller fixed-span structures. The Hargrove Bridge was completed the next year. It featured two rigid-connected pony trusses, suspended from their upper chords by means of cables strung to the steel tower at the bridge's pivot point. The tower rested on cross-girders with pivot wheels, which in turn rolled around a cast steel, circular drum mounted on top of the pivot pier. With its hand-powered pivot crank, the Hargrove Bridge was never easily rotated; as fewer log rafts were floated down the Black River, the pivot span was less often opened. It has been some sixty years since the Hargrove Bridge was last pivoted for river traffic, but it still carries traffic in unaltered condition.

The Hargrove Bridge is technologically and historically significant as an exceedingly rare, small-scale swing truss. No other such movable spans exist in Missouri other than the immense Missouri and Mississippi River bridges. The rigid-connected truss configuration that Miller

and Borcharding used for the Hargrove Bridge also features an unusual combination of Warren and Pratt elements. The diagonals and verticals function like a Warren web, using simple triangulation for structural strength, but the end posts are sloped shallowly like a Pratt. A number of these bridges were built in Butler County between circa 1915 and 1930, and six remain in use today. Additionally, ten other such Pratt/Warren pony trusses have been identified in other counties - all located in southeast or central Missouri and virtually all attributable to Miller and/or Borcharding. (The firm's two principals, R.L. Miller and Louis Borcharding, split from each other in 1917.) The Hargrove Bridge marks a unique two-span, movable application of this proprietary truss type. A well-documented and well-preserved structure, it is one of Missouri's most unusual and most significant early vehicular bridges.

NAME(S) OF STRUCTURE
Hargrove Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 159000.3; Butler County Court Record T: page 501 (1 May 1916), page 551 (1 September 1916), page 567 (16 October 1916), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Bridge
MHTD: 169000.7

BUTL07

DATE(S) OF CONSTRUCTION

1930

LOCATION

county road over Drainage Ditch No. 16; S23/24, T23N, R7E
1.9 miles northwest of Qulin; Butler County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 40)

CONDITION

fair

OWNER

Butler County

span number: 1
span length: 54.0'
total length: 102.0'
roadway wdt.: 11.1'

superstructure: steel, 3-panel, rigid-connected Pratt/Warren pony truss with steel stringer approach spans
substructure: timber pile bent abutments and piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates;
vertical: channel; diagonal: channel; lateral bracing: round rod with threaded ends;
floor beam: I-beam field bolted to lower chord; guardrail: 2 angles

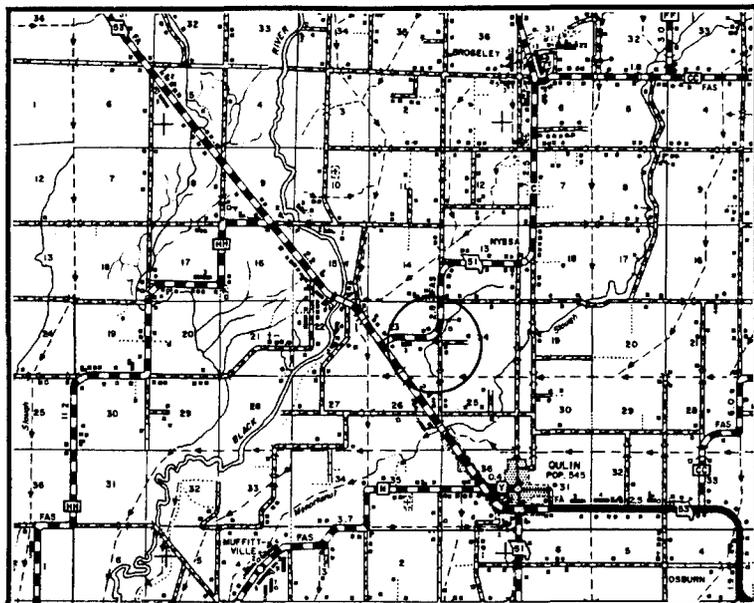
On August 4, 1930, the Butler County Court ordered County Highway Engineer H.F. Scarborough to erect a bridge across Ditch Number 16, at a crossing two miles northwest of Qulin. Obtaining a rigid-connected pony truss - probably from R.L. Miller of St. Louis - Scarborough erected the structure in late summer 1930 using a county work crew. The modestly scaled truss put up by Scarborough featured an uncommon pony truss design with a combination of Pratt and Warren truss elements. The diagonals and verticals function like a Warren web, using simple triangulation for structural strength, but the end posts are sloped shallowly like a Pratt. Having endured only minor maintenance-related repairs, this bridge has changed little over the years.

A number of these uncommon pony trusses were built in Butler County between circa 1915 and 1930, and six remain in use today. Additionally, ten other such Pratt/Warren pony trusses have been identified in other counties - all located in southeast or central Missouri and virtually all attributable to Miller and/or Borcharding. (The firm's two principals, R.L. Miller and Louis Borcharding, split from each other in 1917.) This small-scale bridge over Ditch No. 16 is the most recent documentable example of this proprietary truss type.

NAME(S) OF STRUCTURE

Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 169000.7; Butler County Court Record Z: page 268 (4 August 1930), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Roxie Road Bridge
MHTD: 372000.0

BUTL08

DATE(S) OF CONSTRUCTION

1906

LOCATION

county road over Cane Creek; S10, T24N, R5E
3.7 miles southeast of Stringtown; Butler County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 39)

CONDITION

good

OWNER

Butler County

span number: 1
span length: 90.0'
total length: 138.0'
roadway wdt.: 10.8'

superstructure: steel, 6-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder pier between main span and northwest approach; concrete pier between southeast approach spans

floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eye bars at the hip); diagonal: 2 looped rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; portal strut: angle A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

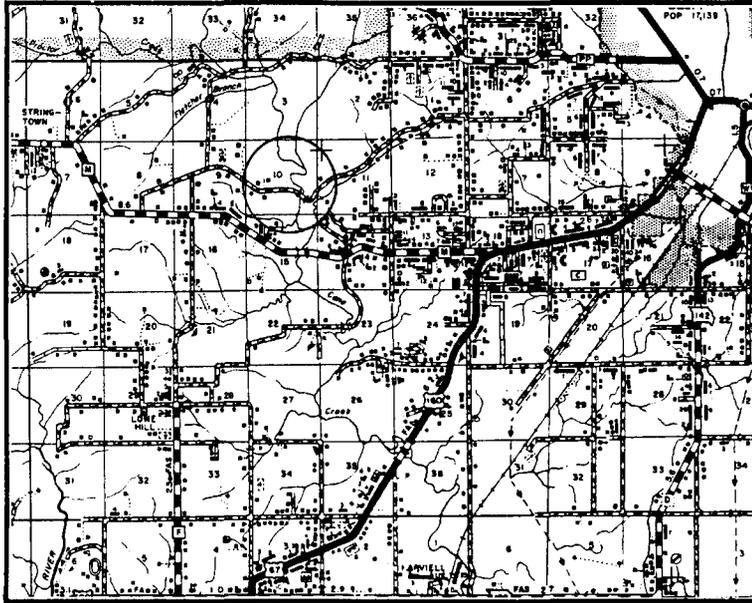
The Roxie Road Bridge crosses over Cane Creek some 3½ miles southeast of Stringtown in west-central Butler County. A pin-connected Pratt through truss, the structure was erected in 1906 by the Stupp Brothers Bridge and Iron Company of St. Louis. A \$1750.00 contract to build the bridge was originally let to local contractors Edy and Kochtilzky on October 5, 1905. But the agreement was rescinded a month later, because "Edy and Kochtilzky have failed to execute said contract and to comply with said order." The project was then relet to Stupp Brothers for \$1700.00. The crossing was completed in early 1906, and has since served to carry local traffic on Roxie Road between Stringtown and Poplar Bluff. The integrity of the bridge's substructure has been compromised by the recent addition of a concrete pier between two approach spans on the southeast end.

The Roxie Road Bridge is a typical example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity.

NAME(S) OF STRUCTURE

Roxie Road Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 372000.0; Butler County Court Record N: page 625 (5 September 1905), page 631 (October 1905); Butler County Court Record P: page 6 (7 November 1905); Butler County Court Record V: page 119 (4 August 1920), page 499 (28 June 1921), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Miller Bridge
MHTD: 399002.7

BUTL09

DATE(S) OF CONSTRUCTION

1901

LOCATION

county road over Cane Creek; S4, T24N, R5E
2.8 miles east of Stringtown; Butler County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / abandoned

RATING NRHP determined non-eligible (score: 39)

CONDITION

fair

OWNER

Butler County

span number: 1
span length: 100.0'
total length: 156.0'
roadway wdt.: 13.0'

superstructure: steel, 7-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: timber abutments; concrete-filled steel cylinder piers under main span; timber pile bent piers under approach spans
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars (inner panels), channel (outer panels); vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; floor beam: I-beam, field-bolted to vertical

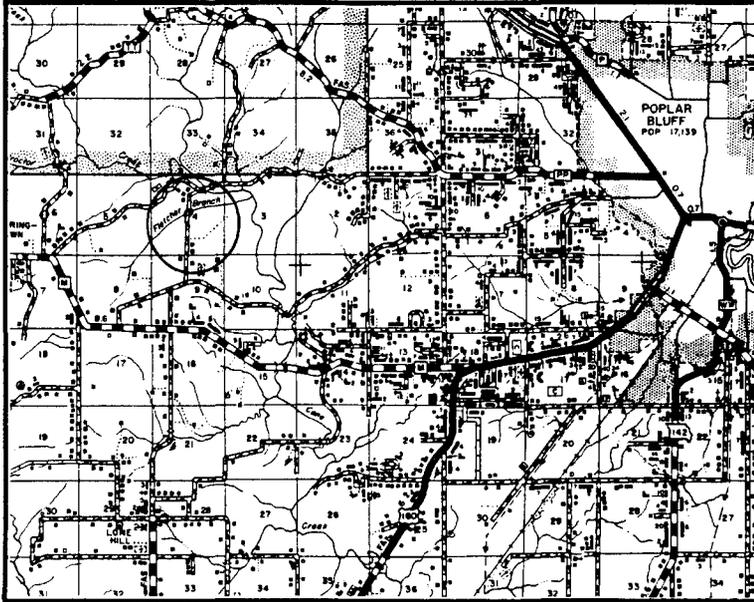
On August 6, 1902, the Butler County Court ordered an iron bridge built across Cane Creek on the "Langley new public road," and that it should cost an estimated \$2500.00. B.J. Puckett, the county surveyor and ex-officio commissioner of roads and bridges, advertised for bids, which were scheduled to be opened on September 1, 1902. On that day the county court awarded a contract for the bridge's construction to the Interstate Bridge Company. By year's end the bridge had been completed, and on December 31, 1902, the Interstate Bridge Company was issued payment of \$2300.00. Known locally as the Miller Bridge, after adjacent landowner E. Miller, the crossing was traditionally used primarily by local residents, until its recent closure.

Though relatively well-preserved, the Miller Bridge is a typical example of a common truss configuration, with standard detailing and unremarkable dimensions.

NAME(S) OF STRUCTURE

Miller Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP



SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 399002.7; Butler County Court Record N: page 53 (6 August 1902), page 57 (1 September 1902), page 60 (1 September 1902), page 118 (29 December 1902), page 124 (31 December 1902), page 130 (31 December 1902), page 176 (1 April 1903), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

17 April 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Pike Creek Bridge
MHTD: 416000.4

BUTL11

DATE(S) OF CONSTRUCTION

1915

LOCATION

county road over Pike Creek; S15, T24N, R6E
1.0 mile south of Poplar Bluff; Butler County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 49)

CONDITION

fair

OWNER

Butler County

span number: 1
span length: 40.0'
total length: 40.0'
roadway wdt.: 11.0'

superstructure: steel, 3-panel, rigid-connected Pratt/Warren pony truss
substructure: concrete abutments and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: I-beam; lower chord: 2 angles with batten plates; vertical: channel; diagonal: channel; lateral bracing: round rod with threaded ends; floor beam: I-beam field bolted to lower chord; guardrail: 2 angles

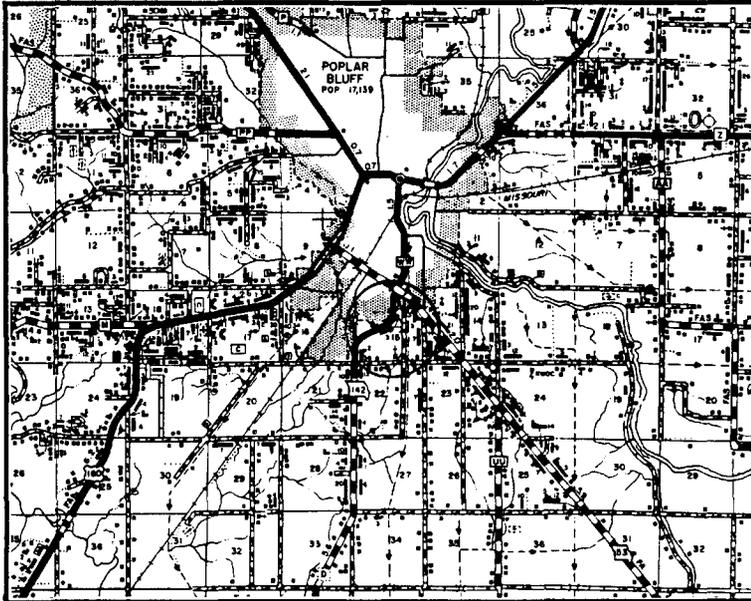
On November 2, 1914, the Butler County Court ordered County Highway Engineer E.C. Nickey to erect a bridge across the Pike Creek Ditch, at a crossing one mile south of Poplar Bluff. Obtaining a rigid-connected pony truss - probably from Miller and Borcharding of St. Louis - Nickey erected the structure the following year. The modestly scaled truss featured an uncommon pony truss design with a combination of Pratt and Warren truss elements. The diagonals and verticals function like a Warren web, using simple triangulation for structural strength, but the end posts are sloped shallowly like a Pratt. Having endured only minor maintenance-related repairs, this bridge has changed little over the years.

A number of these uncommon pony trusses were built in Butler County between circa 1915 and 1930, and six remain in use today. Additionally, ten other such Pratt/Warren pony trusses have been identified in other counties—all located in southeast or central Missouri and virtually all attributable to Miller and/or Borcharding. (The firm's two principals, R.L. Miller and Louis Borcharding, split from each other in 1917.) This small-scale bridge over Pike Creek is the oldest documentable example in the county of this proprietary truss type.

NAME(S) OF STRUCTURE

Pike Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 416000.4; Butler County Court Record O: page 261 (2 November 1914), located at Butler County Courthouse, Poplar Bluff, Missouri; field inspection by Richard Collier, 28 March 1992.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

17 April 1992

CAPE GIRARDEAU COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
CAPE01	G 467R	Millersville Bridge	2-120' riveted Pratt through truss 1923 Muskogee Contracting Company
CAPE02	G 514R	Byrds Creek Bridge	1-100' riveted Pratt through truss 1923 Muskogee Contracting Company
CAPE03	K 27	Bridge	3-120' (replaced)
CAPE04	K 768	Castor River Bridge	3-110' steel plate through girder 1938 Condon, Cunningham, Lemmon
*CAPE05	K 948R1	Cape Girardeau Bridge	2-671' riveted cantilever through truss 1928 American Bridge Company, U.G.I. Contracting Company
CAPE06	L 297R	Bridge	3-150' steel plate deck girder 1949 R.B. Potashnick
CAPE07	069500.1	Cape La Croix Ck. Bridge	(replaced)
*CAPE08	141001.3	Bridge	1- 45' riveted Pratt/Warren pony truss c1920 R.L. Miller and Co. (prob.)
*CAPE09	151001.0	Bridge	1-120' riveted Pratt through truss 1938
CAPE10	162001.2	Bridge	1- 21' concrete deck girder c1920
CAPE11	210002.5	L. Whitewater R. Bridge	1- 80' pinned Pratt pony truss c1915
*CAPE12	275000.1	Burfordville Bridge	1-130' timber Howe truss [covered] 1858 Joseph Lansmon

EXCLUDED:

Pratt pony truss

G 29 G 513R 083000.0 233001.9

Warren pony truss

G 28R H 573 J 225R J 885 014002.6 041000.6 161002.7

Steel stringer

J 883	J 884R	J 886R	K 247	L 259	L 277R	L 278R
L 297R	S 291	S 532	S 675	S 844	S 948	T 788
T 842	U0695006	X 921	Y 302	006001.2	011001.2	020000.0
029002.0	030000.6	047002.2	048001.5	051001.3	053002.0	054000.2
054001.1	066001.2	067000.9	069500.8	071000.0	072002.0	075000.5
075002.8	075003.9	077002.0	079001.0	104000.4	113000.3	122000.8

CAPE GIRARDEAU COUNTY

EXCLUDED (cont.):

Steel stringer

157001.1	166000.2	168000.7	168002.1	169000.9	189000.1	195001.1
195001.8	209001.8	221R00.4	221000.7	224002.2	225001.1	227000.2
234000.3	235002.2	255001.7	256000.6	257001.9	271000.4	273000.1
276000.1						

Steel girder

U0695005

Concrete girder

G 27R	H 144R	H 429R	H 431R	H 572R1	H 574	H 613R
J 56R	J 151R	J 328R1	K 684R	U0695004	U2150001	X 891
024001.0	215000.2					

Concrete slab

G 853R	G 854R	U2150002	039000.4	136000.2
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Concrete box culvert

H 427	H 428	H 611	H 612	H 758R2	J 224	S 756
S 949	U0695002	U0695007	X 409	X 571	X 922	X 953
024001.6	067001.4	077003.1	104001.1	186000.9	207000.2	224001.5
227000.7	233001.7					

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	5	4	0	1	10
Excluded	49	68	10	0	127
	54	72	10	1	137 structures

Millersville Bridge

CAPE01

GENERAL DATA

structure no.:	G 467R	city/town:	Millersville
county:	Cape Girardeau	feature inters.:	Whitewater Creek
		cadastral grid:	S23/26, T32N, R11E
		highway route:	Missouri State Highway 72
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 6-panel, rigid-connected Pratt through truss		
substructure:	concrete abutments, wingwalls and piers		
span number:	2	condition:	good
span length:	120.0'	alterations:	guardrails replaced, 1973
total length:	245.0'	floor/decking :	concrete deck over steel stringers
roadway width:	22.5'	other features:	Armco guardrails

HISTORICAL DATA

erection date:	1923
erection cost:	\$32,401.82
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Muskogee Contracting Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. G 467R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.
sign. rating:	41
evaluation:	NRHP non-eligible (undistinguished example of rigid-connected truss construction)

inventoried by: Michelle Crow-Dolby 12 May 1993

Byrds Creek Bridge

CAPE02

GENERAL DATA

structure no.: G 514R	city/town: 4.6 miles west of Jackson
county: Cape Girardeau	feature inters.: Byrds Creek
	cadastral grid: S5, T31N, R12E
	highway route: U.S. Highway 72
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt through truss	
substructure: concrete abutments and wingwalls	
span number: 1	condition: good
span length: 100.0'	alterations: guardrails replaced, 1973
total length: 104.0'	floor/decking: concrete deck over steel stringers
roadway width: 22.5'	other features: Armco guardrails

HISTORICAL DATA

erection date: 1923
erection cost: \$14,305.61
designer: Missouri State Highway Department
fabricator: unknown
contractor: Muskogee Contracting Company
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. G 514R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Cape Girardeau County Court Record U: page 387 (7 February 1905), page 477 (4 May 1905), n.p. (3 July 1905) - located at Cape Girardeau County Courthouse, Jackson MO.
sign. rating: 36
evaluation: NRHP non-eligible (typical example of a common truss design)

inventoried by: Michelle Crow-Dolby 12 May 1993

Castor River Bridge

CAPE04

GENERAL DATA

structure no.: K 768 city/town: 6.4 miles west of Delta
county: Cape Girardeau feature inters.: Castor River Diversion Channel
cadastral grid: S5, T29N, R11E
highway route: State Supplementary Route N
highway distr.: 10
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel plate through girder, skewed
substructure: concrete abutments, wingwalls and piers

span number: 1; 2 condition: good
span length: 110.0'; 70.0' alterations: none
total length: 261.0' floor/decking : concrete deck over steel stringers
roadway width: 22.0' other features: unknown

HISTORICAL DATA

erection date: 1939
erection cost: \$38,716.82
designer: Missouri State Highway Department
fabricator : unknown
contractor: Condon, Cunningham and Lemmon

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 768; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City, MO.

sign. rating: 54
evaluation: NRHP possibly eligible (a typically configured, long-span example of MSHD beam bridge design)

inventoried by: Michelle Crow-Dolby 12 May 1993

Cape Girardeau Bridge

CAPE05

GENERAL DATA

structure no.: K 948R1 city/town: Cape Girardeau
county: Cape Girardeau MO feature inters.: Mississippi River
Alexander IL cadastral grid: S1, T30N, R13E
highway route: Missouri State Highway 146
highway distr.: 10
current owner: Missouri Highway and Transportation Department / Illinois Department of Transportation

STRUCTURAL DATA

superstructure: steel, rigid-connected, cantilevered through truss; 6, 14-panel, rigid-connected Parker through truss approach spans at the east end; 2 plate girder approach spans and 6, transverse-ribbed, concrete slab approach spans at the west end
substructure: concrete abutments and piers; steel pile bent pier between plate girder approach spans

span number: 2 condition: good
span length: 671.0' alterations: none
total length: 4744.0' floor/decking : concrete deck over steel stringers
roadway width: 20.0' other features: upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 2 built-up channels with lacing; vertical: 4 angles with lacing; diagonal: 4 angles with lacing; lateral bracing: 4 angles with lacing - top, 2 angles - bottom; strut: 4 angles with lacing, braced; floor beam: plate girder; guardrail: 3 channels; builder's plate:
Erected 1927 By The Cape Girardeau Bridge Co Harrington, Howard and Ash Consulting Engineers American Bridge Co The U.G.I. Contracting Co Contractors

HISTORICAL DATA

erection date: 1927-28
erection cost: \$1,600,000.00
designer: Harrington, Howard and Ash, Kansas City MO
fabricator : American Bridge Company, Pittsburgh PA
contractor: American Bridge Company, Pittsburgh PA (superstructure);
United Gas and Improvement Company, Philadelphia PA (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 948R1; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; **Cape Girardeau Bulletin**: "Traffic Bridge to Be Free Saturday" (28 June 1957), "History of the Cape Girardeau Bridge" (25 July 1968), "Know Your City... Cape Girardeau Bridge" (5 September 1969),

Cape Girardeau Bridge

"Mississippi River Bridge Here Rich in History" (24 May 1983), "The River City of Cape Girardeau and Its Environs" (13 September 1984); **Southeast Missourian**: "Fifty Years Ago: Dreams of Steel" (3 September 1978), "Cape Girardeau's Mississippi River Bridge" (June 1982); **Action: The Chamber News**: "Cape Girardeau's Mississippi River Bridge" (June 1982); field inspection by Richard Collier, 24 March 1992.

sign. rating: 66

evaluation: NRHP possibly eligible (excellent example of long-span truss design)

inventoried by: Michelle Crow-Dolby 12 May 1993

Bridge

CAPE06

GENERAL DATA

structure no.: L 297R city/town: 5.1 miles east of Blomeyer
county: Cape Girardeau feature inters.: Drainage Ditch No. 2
cadastral grid: S26, T30N, R13E
highway route: Interstate Highway 55
highway distr.: 10
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel continuous plate deck girders; 30 continuous steel stringer approach spans
substructure: concrete abutments, wingwalls and hammerhead spill-through piers
span number: 1; 2 condition: good
span length: 150.0'; 120.0' alterations: deck repaired, 1988
total length: 1471.0' floor/decking : concrete deck over steel stringers
roadway width: 28.0' other features: steel angle guardrails

HISTORICAL DATA

erection date: 1949
erection cost: \$476,581.50
designer: Missouri State Highway Department
fabricator : unknown
contractor: R.B. Potashnick
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. L 297R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Cape Girardeau County Court Record X: page 512 (3 October 1910) - located at Cape Girardeau County Courthouse, Jackson MO.
sign. rating: 53
evaluation: NRHP possibly eligible (longest example in inventory of this MSHD beam bridge type)

inventoried by: Michelle Crow-Dolby 12 May 1993

Bridge

CAPE08

GENERAL DATA

structure no.: 141001.3 **city/town:** 8.1 miles southwest of Delta
county: Cape Girardeau **feature inters.:** Drainage Ditch No. 8
 Bollinger **cadastral grid:** S29, T29N, R11E
 highway route: County Road 141
 highway distr.: 10
 current owner: Cape Girardeau County / Bollinger County

STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected Pratt/Warren pony truss
substructure: timber pile bent piers with timber back- and wingwalls

span number: 1 **condition:** fair
span length: 45.0' **alterations:** none
total length: 46.0' **floor/decking :** timber deck over steel stringers
roadway width: 11.0' **other features:** upper chord and inclined end post: I-beam;
 lower chord: 2 angles with batten plates;
 vertical: 1 channel; diagonal: 1 channel;
 lateral bracing: round rod with threaded ends;
 floor beam: I-beams; guardrail: 2 angles

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: R.L. Miller and Company, St. Louis MO [probable]
fabricator : unknown
contractor: R.L. Miller and Company, St. Louis MO [probable]

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 141001.3; field inspection by Richard Collier, 25 March 1992.

sign. rating: 33
evaluation: NRHP non-eligible (an uncommon structural type, but lacking in documentation)

inventoried by: Michelle Crow-Dolby 12 May 1993

Bridge

CAPE09

GENERAL DATA

structure no.: 151001.0 city/town: 1.4 miles southwest of Whitewater
county: Cape Girardeau feature inters.: Headwater Diversion Channel
cadastral grid: S34/35, T30N, R11E
highway route: County Road 151
highway distr.: 10
current owner: Cape Girardeau County

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss, with 1 steel stringer approach span at the south end
substructure: concrete abutments, wingwalls and pier

span number: 1 condition: fair
span length: 120.0' alterations: none
total length: 153.0' floor/decking : timber deck over steel stringers
roadway width: 15.5' other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 2 channels with lacing; diagonal: 2 angles with batten plates; lateral bracing: 1 angle - bottom, 4 angles with lacing - top; strut: 4 angles, laced with angle knee braces; floor beam: I-beam; guardrail: 2 channels

HISTORICAL DATA

erection date: 1938
erection cost: unknown
designer: Missouri State Highway Department
fabricator : Illinois Steel Company, Chicago IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 151001.0; Cape Girardeau County Court Record 32: page 87 (3 October 1938) -located at Cape Girardeau County Courthouse, Jackson MO; field inspection by Richard Collier and Carl McWilliams, 25 March 1992.

sign. rating: 33
evaluation: NRHP determined non-eligible (largely undocumented, late example of a mainstay structural type)

inventoried by: Michelle Crow-Dolby 12 May 1993

Bridge

CAPE10

GENERAL DATA

structure no.:	162001.2	city/town:	3.1 miles west of Dutchtown
county:	Cape Girardeau	feature inters.:	drainage ditch
		cadastral grid:	S21, T30N, R12E
		highway route:	County Road 162
		highway distr.:	10
		current owner:	Cape Girardeau County

STRUCTURAL DATA

superstructure:	concrete deck girder		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	fair
span length:	21.0'	alterations:	unknown
total length:	22.0'	floor/decking :	concrete deck
roadway width:	16.1'	other features:	low concrete curbs

HISTORICAL DATA

erection date:	c1920
erection cost:	unknown
designer:	unknown
fabricator :	none
contractor:	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 162001.2.

sign. rating:	26
evaluation:	NRHP non-eligible (a short-span example of a rudimentary concrete design)

inventoried by: Michelle Crow-Dolby 12 May 1993

Little Whitewater River Bridge

CAPE11

GENERAL DATA

structure no.: 210002.5	city/town: 1.5 miles northwest of Millersville
county: Cape Girardeau	feature inters.: Little Whitewater River
	cadastral grid: S15, T32N, R11E
	highway route: County Road 210
	highway distr.: 10
	current owner: Cape Girardeau County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss	
substructure: concrete abutments and wingwalls; concrete spill-through, hammerhead piers	
span number: 1	condition: fair
span length: 80.0'	alterations: truss moved or substructure replaced
total length: 125.0'	floor/decking : timber deck
roadway width: 12.0'	other features: steel pipe guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 210002.5.

sign. rating: 26
evaluation: NRHP non-eligible (a longer-than-average pin-connected Pratt pony truss, one of hundreds of similar undocumented structures)

inventoried by: Michelle Crow-Dolby 12 May 1993

Burfordville Covered Bridge

CAPE12

GENERAL DATA

structure no.:	275000.1	city/town:	Burfordville
county:	Cape Girardeau	feature inters.:	Whitewater River
		cadastral grid:	S14, T31N, R11E
		highway route:	county road
		highway distr.:	10
		current owner:	Missouri Department of Natural Resources

STRUCTURAL DATA

superstructure:	covered timber Howe truss		
substructure:	stone abutments		
span number:	1	condition:	good
span length:	130.0'	alterations:	restored
total length:	140.0'	floor/decking:	timber deck over heavy timber stringers
roadway width:	11.8'	other features:	gable roof with 2x6 rafters and 2x4 collar ties; upper chord, end posts, lower chord, diagonal, lateral bracing, floor beams, and guardrails: all heavy timbers; vertical: iron rods; chiseled in the abutment at the northeast corner is the inscription: 1858 J.L.

HISTORICAL DATA

erection date:	1858; 1868
erection cost:	unknown
designer:	unknown
fabricator:	none
contractor:	Joseph Lansmon, Cape Girardeau MO
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 275000.1; "Missouri Census of 1840 (Cape Girardeau County); "1860 Federal Census" (Cape Girardeau County, Missouri); Cape Girardeau Plat Book 1 (1858); Cape Girardeau County Court Record W: page 141 (3 March 1908), page 142 (3 March 1908), page 286 (5 August 1908), page 349 (1 October 1908) - located at Cape Girardeau County Courthouse, Jackson MO; Southeast Missourian "Burfordville Bridge Opens After Repairs" (17 November 1985), "Burfordville... Then and Now" (23 March 1986); National Register of Historic Places Inventory - Nomination Form: "Burfordville Covered Bridge" 5 March 1970); field inspection by Richard Collier, 26 March 1992
sign. rating:	83
evaluation:	NRHP individually listed, 1970 (one of only four covered bridges in Missouri)

inventoried by: Michelle Crow-Dolby 12 May 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Castor River Bridge
MHTD: K 768

CAPE04

DATE(S) OF CONSTRUCTION

1939

LOCATION

State Supplementary Route N over Castor River Diversion Channel; S5, T29N, R11E highway bridge / highway bridge
6.4 miles west of Delta; Cape Girardeau County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 54)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 1; 2

span length: 110.0'; 70.0'

total length: 261.0'

roadway wdt.: 22.0'

superstructure: steel plate through girder, skewed

substructure: concrete abutments, wingwalls and piers

floor/decking: concrete deck over steel stringers

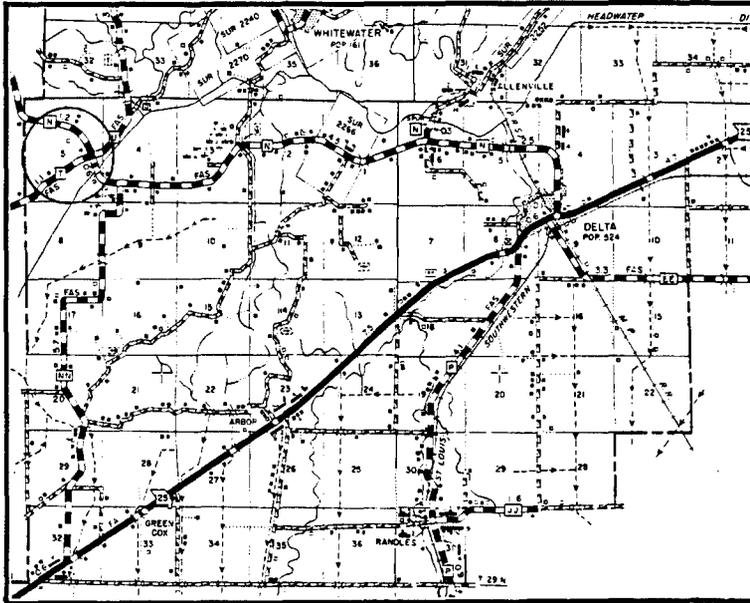
other features: unknown

This multiple-span bridge carries State Supplementary Route N over the Castor River at a rural crossing west of Delta. The structure consists of a single long-span, riveted plate through girder, flanked by a pair of shorter through girder approach spans; the superstructure is supported by concrete piers and abutments. The Castor River Bridge was engineered by the Missouri State Highway Department late in 1938. Designating the project as Federal Aid Secondary Project 4A(1), the agency solicited competitive proposals in June. In December the state highway commission awarded a contract to build the bridge to Condon, Cunningham & Lemmon. The contractors apparently completed the structure in 1939 for \$38,716.82. Since that time the bridge has functioned in place, with only minor maintenance-related repairs.

Through the 1930s and 1940s, the Missouri State Highway Department designed and built progressively longer steel beam bridges, using both rolled and plate girders in through and deck configurations. This culminated at the end of the decade with spans around 150 feet. Other longer girders had been built elsewhere in the country, but for Missouri, this represented a noteworthy technological feat. With its 110-foot through girder span and 1938 construction date, the Castor River Bridge is noteworthy as one of these long-span beam bridges.

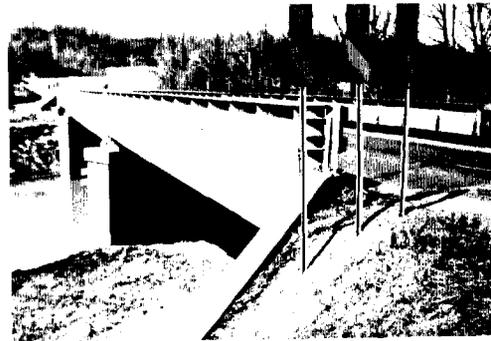
NAME(S) OF STRUCTURE
Castor River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP



SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 768; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City, MO.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
15 January 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Cape Girardeau Bridge (Mississippi River Bridge)
MHTD: K 948R1

CAPE05

DATE(S) OF CONSTRUCTION

1927-28

LOCATION

Missouri State Highway 146 over Mississippi River; S1, T30N, R13E
Cape Girardeau; Cape Girardeau MO / Alexander IL County, Missouri

USE (ORIGINAL / CURRENT)

highway toll bridge / highway bridge

RATING NRHP potentially eligible (score: 66)

CONDITION

good

OWNER

Missouri Highway and Transportation Department / Illinois Department of Transportation

span number: 2
span length: 671.0'
total length: 4744.0'
roadway wdt.: 20.0'

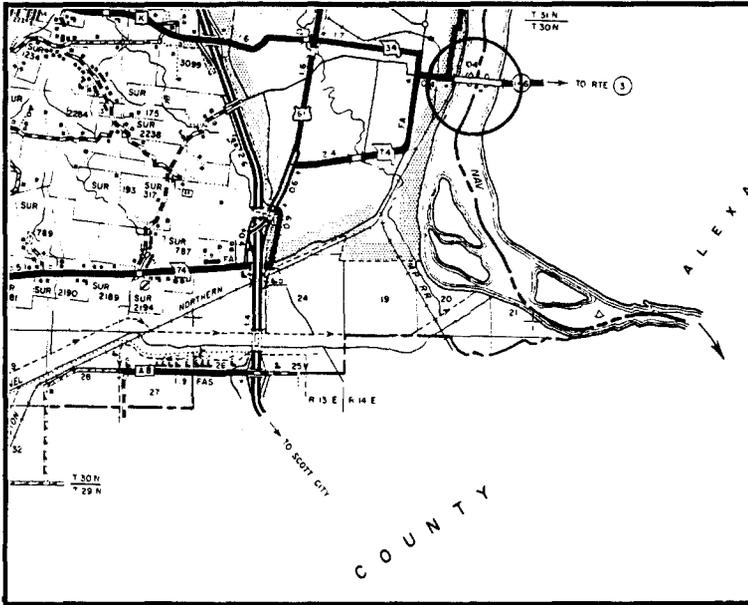
superstructure: steel, rigid-connected, cantilevered through truss; 6, 14-panel, rigid-connected Parker through truss approach spans at the east end; 2 plate girder approach spans and 6, transverse-ribbed, concrete slab approach spans at the west end
substructure: concrete abutments and piers; steel pile bent pier between plate girder approach spans
floor/decking: concrete deck over steel stringers
other features: upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 2 built-up channels with lacing; vertical: 4 angles with lacing; diagonal: 4 angles with lacing; lateral bracing: 4 angles with lacing - top, 2 angles - bottom; strut: 4 angles with lacing, braced; floor beam: plate girder; guardrail: 3 channels; builder's plate: Erected 1927 By The Cape Girardeau Bridge Co Harrington, Howard and Ash Consulting Engineers American Bridge Co The U.G.I. Contracting Co Contractors

The Cape Girardeau Bridge carries Missouri State Highway 146 over the Mississippi River at Cape Girardeau, in southeastern Missouri. From east to west the structure is comprised of: six rigid-connected Parker through truss approach spans; two cantilever through truss channel spans, two plate girder approach spans, and six concrete deck girder approach spans. Linking southeastern Missouri with the greater Middle Mississippi Valley, the structure was completed in the summer of 1928. Formally dedicated at a special pageant held on September 3rd of that year, the bridge was hailed as "The Gateway to the Ozarks" and was championed as a connection between the state's Bootheel region and eastern metropoli such as Chicago and Memphis. Local business leaders had begun to push for a crossing here in 1919, but it was not until the Cape Girardeau Chamber of Commerce formed a "Bridge Committee" some six years later, that the project began to get off the ground. The bridge's construction was spearheaded by the Cape Girardeau Bridge Company, which financed the venture through the sale of preferred stock and mortgage bonds. After its completion, the bridge operated as a toll crossing until June 1957. The bridge has functioned as a free crossing since that time.

Bridges over the Mississippi River comprise some of America's longest examples of vehicular steel truss construction. With over 400 miles fronting on the great river, Missouri possesses several notable Mississippi River bridges. Seven of these, including the Cape Girardeau Bridge, are included in the statewide historic bridge inventory, and are all individually eligible for the National Register. With an overall span length of over 4700 feet, the Cape Girardeau Bridge ranks among Missouri's most monumental examples of steel truss construction. Featuring a cantilevered design, and multiple Parker, plate girder and concrete approach spans, the structure clearly ranks as a superlative example of its type. The bridge possesses additional importance, having served on a major highway, as a pivotal interstate crossing.

NAME(S) OF STRUCTURE

Cape Girardeau Bridge (Mississippi River Bridge)

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 948R1; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; **Cape Girardeau Bulletin**: "Traffic Bridge to Be Free Saturday" (28 June 1957), "History of the Cape Girardeau Bridge" (25 July 1968), "Know Your City... Cape Girardeau Bridge" (5 September 1969), "Mississippi River Bridge Here Rich in History" (24 May 1983), "The River City of Cape Girardeau and Its Environs" (13 September 1984); **Southeast Missourian**: "Fifty Years Ago: Dreams of Steel" (3 September 1978), "Cape Girardeau's Mississippi River Bridge" (June 1982); **Action: The Chamber News**: "Cape Girardeau's Mississippi River Bridge" (June 1982); field inspection by Richard Collier, 24 March 1992.

INVENTORIED BY

Michelle Crow-Dolby

AFFILIATION

Fraserdesign, Loveland CO

DATE

12 May 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Ditch No. 2 Bridge
MHTD: L 297R

CAPE06

DATE(S) OF CONSTRUCTION

1949

LOCATION

Interstate Highway 55 over Drainage Ditch No. 2; S26, T30N, R13E
5.1 miles east of Blomeyer; Cape Girardeau County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 53)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 1; 2	superstructure: steel continuous plate deck girders; 30 continuous steel stringer approach spans
span length: 150.0'; 120.0'	substructure: concrete abutments, wingwalls and hammerhead spill-through piers
total length: 1471.0'	floor/decking: concrete deck over steel stringers
roadway wdt.: 28.0'	other features: steel angle guardrails

This multiple-span bridge carries Interstate Highway 55 over the headwater diversion channel of Drainage Ditch No. 2, at a rural crossing east of Blomeyer. The structure consists of a series of three long-span, riveted plate deck girders, with a series of 30 steel stringer approach spans, all supported by spill-through concrete piers. The bridge was engineered by the Missouri State Highway Commission Bureau of Bridges early in 1949. Designating the project as FI-289(6)a, the agency solicited competitive proposals in June. A month later the state highway commission awarded a construction contract to R.B. Potashnick. Potashnick's crew completed the structure later that year for \$476,581.50; since that time the bridge has functioned in place, with deck repairs undertaken in 1988 as the only alteration of note.

Through the 1930s and 1940s, the Missouri State Highway Department designed and built progressively longer steel beam bridges, using both rolled and plate girders in through and deck configurations. This culminated at the end of the decade with spans around 150 feet. Other longer girders had been built elsewhere in the country, but for Missouri, this represented a noteworthy technological feat. With its 150-foot deck girder spans, this bridge in Cape Girardeau County is distinguished as the longest beam bridge identified in the statewide inventory. Although built late in the milieu of bridge construction in Missouri, it is significant as the ultimate extension in the state of this utilitarian structural type.

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Burfordville Covered Bridge
MHTD: 275000.1

CAPE12

DATE(S) OF CONSTRUCTION

1858; 1868

LOCATION

county road over Whitewater River; S14, T31N, R11E
Burfordville; Cape Girardeau County, Missouri

USE (ORIGINAL / CURRENT)

toll road bridge / closed

RATING NRHP individually listed, 1970 (score: 83)

CONDITION

good

OWNER

Missouri Department of Natural Resources

span number: 1

span length: 130.0'

total length: 140.0'

roadway wdt.: 11.8'

superstructure: covered timber Howe truss

substructure: stone abutments

floor/decking: timber deck over heavy timber stringers

other features: gable roof with 2x6 rafters and 2x4 collar ties; upper chord, end posts, lower chord, diagonal, lateral bracing, floor beams, and guardrails: all heavy timbers; vertical: iron rods; chiseled in the abutment at the northeast corner is the inscription: 1858 J.L.

During the nineteenth century the covered timber bridge was a mainstay means of spanning streams and rivers on roadways throughout rural America. During this era, the ready availability and concomitant low cost of timber contributed to the popularity of wooden bridges. Moreover, because wooden structural members could not long withstand the forces of nature, such bridges were often covered to provide protection, and thus increase their longevity. After the industrial revolution, timber bridges, covered or otherwise, were eclipsed first by all iron, and later by steel trusses. Early covered bridges were usually Kingpost or Queenpost trusses (both used for shorter crossings), a Burr Arch-Truss (patented by Theodore Burr of Pennsylvania in 1804), or a Town Lattice Truss (patented by Ithiel Town in 1820). In 1840 William Howe of Massachusetts patented a new truss design which featured diagonal wooden members acting in compression, combined with iron verticals acting in tension. Located adjacent to the historic Bollinger Mill, the Burfordville Bridge is an example of a Howe Truss design.

Because it was built as a toll crossing by a private company (the Cape Girardeau McAdamized and Plank Road Company), the construction of the Burfordville Bridge was not recorded in county records. References to the crossing (regarding repairs) first appear in minutes of the Cape Girardeau County Court in 1908. Secondary sources indicate that Joseph Lansmon of Cape Girardeau began work on the crossing in 1858, and indeed, the initials "J.L." and the date "1858" are chiseled in the abutment at the bridge's northeast corner. The sources further suggest that work on the bridge was suspended during the Civil War, and that the crossing was then not completed until 1868. This may have been the case, but a more plausible theory may be that the entire crossing was completed circa 1858, that the wooden truss was burned during the war, and was then replaced in 1868 by a new bridge, built on the original stone abutments. Such bridges were typically built in less than a year's time, and if construction began in 1858, the crossing would likely have been completed

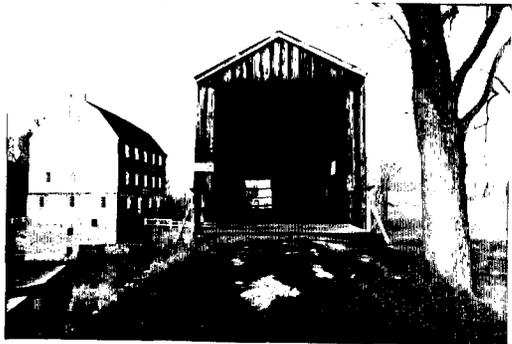
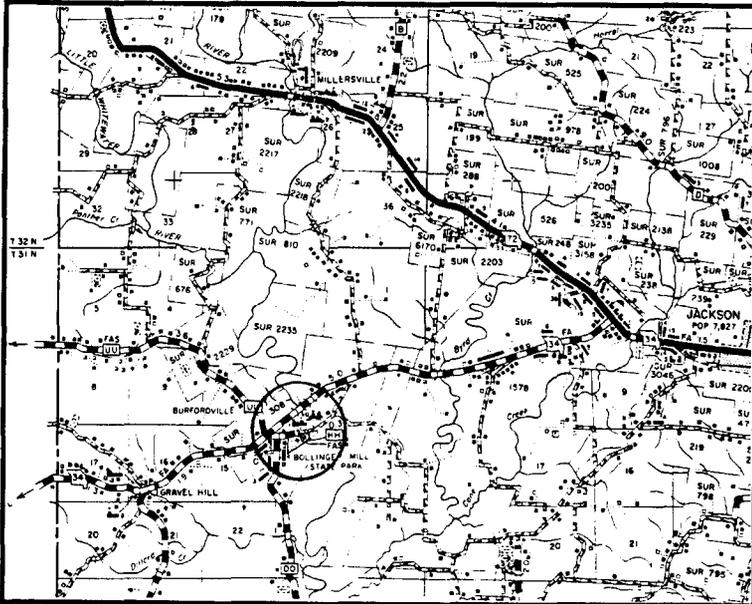
well in advance of the war. During the conflict, Bollinger Mill was operated by the sons of Sarah (Bollinger) Daugherty, Samuel and George Daugherty. The Daugherty's were confederate sympathizers, and to prevent them from passing flour and meal to the confederates, Union troops raided the site in late August and early September 1861. In the three day attack, Union soldiers confiscated grain, wrecked machinery, and eventually set fire to the mill and a nearby house. Historical accounts of the event do not mention the bridge, but if it was in existence, the troops likely burned it as well. Whether a new bridge was built in 1868, or the original crossing simply took ten years to complete, the Burfordville Covered Bridge is Missouri's oldest remaining vehicular crossing.

In more recent times, the bridge was extensively renovated in 1950 by the Missouri State Highway Commission. The bridge and mill were obtained by the Cape Girardeau Historical Society in 1954, and they have since been managed jointly as a historic site. In 1967 the State of Missouri took over stewardship of its remaining covered bridges. Administered as State Historic Sites by the Department of Natural Resources, four such bridges still exist, and have each been listed in the National Register of Historic Places. In addition to the Burfordville Bridge, Missouri's three other covered bridges include the Sandy Creek Covered Bridge near Hillsboro, the Locust Creek Covered Bridge in Linn County, and the Union Covered Bridge near Paris in Monroe County. The Burfordville Bridge was listed in the National Register of Historic Places in 1970.

The historical significance of the Burfordville Covered Bridge can hardly be overstated. One of only four covered bridges left in the state, the crossing is a rare, well-preserved, example of bridge construction from the mid-19th century, prior to the proliferation of iron and steel trusses.

NAME(S) OF STRUCTURE

Burfordville Covered Bridge

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 275000.1; "Missouri Census of 1840 (Cape Girardeau County); "1860 Federal Census" (Cape Girardeau County, Missouri); Cape Girardeau Plat Book 1 (1858); Cape Girardeau County Court Record W: page 141 (3 March 1908), page 142 (3 March 1908), page 286 (5 August 1908), page 349 (1 October 1908) - located at Cape Girardeau County Courthouse, Jackson MO; *Southeast Missourian* "Burfordville Bridge Opens After Repairs" (17 November 1985), "Burfordville... Then and Now" (23 March 1986); National Register of Historic Places Inventory - Nomination Form: "Burfordville Covered Bridge" 5 March 1970); field inspection by Richard Collier, 26 March 1992.

INVENTORIED BY

Michelle Crow-Dolby

AFFILIATION

Fraserdesign, Loveland CO

DATE

12 May 1992

DUNKLIN COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv.No.	MHTD	Bridge Name	Description
DUNK01	G 433R	St. Francis River Bridge	1-140' riveted Parker through truss 1923 M.E. Gillioz
DUNK02	K 838	Bridge	12-30' steel stringer 1939 Fred Weber Jr. / C.H. Atkinson
DUNK03	087000.2	Bridge	1- 48' pinned Pratt bedstead 1905 Missouri Bridge & Iron Co.

EXCLUDED:

Warren pony truss

F 631R1 F 633R1 F 904R1 F 965R1 G 963R

Steel stringer

F 964R1	F1001R	G 422R	G 423R	G 424R	G 584R	H 927R
J 842	J 854	K 682	K 722	L 301	L 302	L 303
L 304	L 305	L 306	S 233	S 375	S 376	S 377
S 378	S 520	S 521	S 768	S 882	S 924	S 973
S 974	S 975	T 849	T 850	T 851	T 912	X 279
X 280	X 281	X 511	X 512	X 586	X 658	143000.6
150000.5	176001.7	232R02.1	249000.7	258R01.9	278000.6	306001.3
312000.7	314002.6	338000.6				

Concrete girder

G 426 K 669 068000.4 068000.5

Concrete slab

F 956R1	F1123R2	G 425R	H 207	H 208	H 209	J 234
J 235	068000.2	068000.3				

Concrete box culvert

F 902R1 F1002R J 577 L 275 L 276 X 587

Timber stringer

T1031	T1032	032000.0	068000.1	167000.5	202002.8	209002.0
212000.0	213000.4	216001.8	234000.5	235000.5	239000.2	256000.8
259000.2	260000.5	267000.7	272000.2	322000.0	329R01.3	374000.2
383000.5	395000.1	396002.7	396003.1	412000.9	467000.4	

DUNKLIN COUNTY

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	2	1	0	0	3
Excluded	64	40	1	0	105
<hr/>					
	66	41	1	0	108 structures

St. Francis River Bridge

DUNK01

GENERAL DATA

structure no.: G 433R	city/town: 1.9 miles southwest of Glennonville
county: Dunklin	feature inters.: St. Francis River
	cadastral grid: S15, T22N, R8E
	highway route: State Highway 53
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: rigid-connected Parker through truss, with multiple steel stringer approach spans	
substructure: concrete abutments, wingwalls and piers	
span number: 1	condition: good
span length: 140.0'	alterations: substructure substantially remodeled, 1939
total length: 655.0'	floor/decking : concrete deck over steel stringers
roadway width: 26.0'	other features: steel guardrails

HISTORICAL DATA

erection date: 1922-23	
erection cost: \$44,905.15	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: M.E. Gillioz, Monett MO	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 433 R; Primary System Bridge Record - located at Bridge Division, Missouri Highway and Transportation Department, Jefferson City MO.	
sign. rating: 47	
evaluation: NRHP non-eligible (typically built riveted Parker through truss - a main-stay design for medium- and long-span river crossings in the 1920s and 30s; substructure substantially altered)	

inventoried by: Clayton B. Fraser 2 November 1992

Bridge

DUNK02

GENERAL DATA

structure no.:	K 838	city/town:	1.9 miles southwest of Glennonville
county:	Dunklin	feature inters.:	St. Francis River overflow
		cadastral grid:	S15, T22N, R8E
		highway route:	State Highway 53
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel stringer	condition:	good
substructure:	unknown	alterations:	none
span number:	12	floor/decking :	concrete deck over steel stringers
span length:	30.0'	other features:	steel guardrails
total length:	391.0'		
roadway width:	26.0'		

HISTORICAL DATA

erection date: 1939
erection cost: \$34,996.8
designer: Missouri State Highway Department
fabricator : unknown
contractor : Fred Weber, Jr., and C.H. Atkinson Paving Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 838; Primary System Bridge Record - located at Bridge Division, Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 40
evaluation: NRHP non-eligible (distinguished somewhat by its multiple spans, but otherwise a typically configured example of a common highway bridge type)

inventoried by: Clayton B. Fraser 2 November 1992

Bridge

DUNK03

GENERAL DATA

structure no.: 087000.2	city/town: 3.0 miles west of Malden
county: Dunklin	feature inters.: drainage ditch
	cadastral grid: S6, T22N, R10E
	highway route: County Road 87
	highway distr.: 10
	current owner: Dunklin County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead	
substructure: steel truss-leg abutments, with timber back- and wingwalls	
span number: 1	condition: fair
span length: 48.0'	alterations: unknown
total length: 49.0'	floor/decking : timber deck
roadway width: 16.0'	other features: steel lattice guardrails; builder's plate: BUILT BY / MISSOURI BRIDGE & IRON CO. / ST. LOUIS / 1905

HISTORICAL DATA

erection date: 1905	
erection cost: unknown	
designer: Missouri Bridge and Iron Company, St. Louis MO	
fabricator : Missouri Bridge and Iron Company, St. Louis MO	
contractor: Missouri Bridge and Iron Company, St. Louis MO	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 087000.2.	
sign. rating: 41	
evaluation: NRHP non-eligible (typically configured example of common structural type, built by one of the state's most prolific bridge builders)	

inventoried by: Clayton B. Fraser 3 November 1992

MADISON COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
MADI01	G 443R	Castor River Bridge	3-100' riveted Pratt through truss 1924 Vincennes Bridge Company
MADI02	G 700R	Castor River Bridge	(replaced)
MADI03	J 521	St. Francis River Bridge	1-140' riveted Pratt through truss 1931 E.W. Deering
MADI04	T 71	St. Francis River Bridge	2-120' riveted Pratt through truss 1936 James R. Hancock
MADI05	110000.1	Rock Creek Bridge	1- 40' concrete deck girder 1919 Hogan and Humphreys

EXCLUDED:

Pratt pony truss

G 486R 008000.9 066002.0

Warren pony truss

G 437R 066003.2 111000.1

Steel stringer

F 81R G 331R S 694 T 92 T 93 065001.5 152000.3
 2670R0.3

Steel girder

152000.1

Concrete girder

F 537 G 328 J 20 J 79R J 80R J 81R K 761R
 L 46 T 627 112000.6

Concrete slab

T 625 Y 589 021002.0 033001.6 042000.6 049000.8

Concrete box culvert

F 82R F 538R G 329R1 H 294 K 762 L 47 L 71
 S 247 T 67 T 626 T 682 T 762 T 830 X 98
 001002.0 002000.3 002000.4 010000.3 010003.0 014000.8 029000.5
 034000.4 040000.7 040000.8 047001.6 048001.0 051000.8 054001.5
 071000.8 079002.5 080000.7 085001.7 089000.1 113000.3 267000.1
 267000.2

MADISON COUNTY

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	3	1	0	0	4
Excluded	32	35	0	0	67
<hr/>					
	35	36	0	0	71 structures

Castor River Bridge

MADI01

GENERAL DATA

structure no.: G 443R	city/town: 6.9 miles southeast of Fredericktown
county: Madison	feature inters.: Castor River
	cadastral grid: S21/28, T33N, R8E
	highway route: State Highway 72
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt through truss	
substructure: concrete abutments, wingwalls and piers	
span number: 3	condition: good
span length: 100.0'	alterations: guardrail replaced, 1973
total length: 307.0'	floor/decking : concrete deck over steel stringers
roadway width: 22.5'	other features: Armco guardrail

HISTORICAL DATA

erection date: 1923-24	
erection cost: \$30,009.98	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: Vincennes Bridge Company, Vincennes IN	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 443R; Missouri Highway and Transportation Department, Primary System Bridge Record (see entries for Madison County), on file at MHTD, Jefferson City MO; Fourth Biennial Report of the Missouri State Highway Commission: 1923-24, page 158.	
sign. rating: 39	
evaluation: NRHP non-eligible (typically configured example of riveted Pratt through truss construction)	

inventoried by: Clayton B. Fraser 29 April 1993

St. Francis River Bridge

MADI03

GENERAL DATA

structure no.: J 521	city/town: 4.5 miles south of French Mills
county: Madison	feature inters.: St. Francis River
	cadastral grid: S10/11, T31N, R5E
	highway route: State Supplementary Route C
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss with steel stringer approach spans

substructure: concrete abutments, wingwalls and piers; timber pile bent piers at approaches

span number: 1	condition: good
span length: 140.0'	alterations: none
total length: 274.0'	floor/decking : concrete deck over steel stringers
roadway width: 20.0'	other features: steel pipe guardrail

HISTORICAL DATA

erection date: 1931

erection cost: \$20,251.33

designer: Missouri State Highway Department

fabricator : unknown

contractor: E.W. Deering

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 521; Missouri Highway and Transportation Department, Primary System Bridge Record (see entries for Madison County), on file at MHTD, Jefferson City MO; **Eighth Biennial Report of the Missouri State Highway Commission: 1931-32, page 309.**

sign. rating: 36

evaluation: NRHP non-eligible (typical example of MSHD truss design of the 1920s and 1930s)

Inventoried by: Clayton B. Fraser 29 April 1993

St. Francis River Bridge

MADI04

GENERAL DATA

structure no.: T 71	city/town: 4.1 miles north of French Mills
county: Madison	feature inters.: St. Francis River
	cadastral grid: S35, T33N, R5E
	highway route: State Secondary Highway E
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss with steel stringer approach spans	
substructure: concrete abutments, wingwalls and piers	
span number: 2	condition: good
span length: 120.0'	alterations: none
total length: 346.0'	floor/decking : concrete deck over steel stringers
roadway width: 20.0'	other features: steel guardrails

HISTORICAL DATA

erection date: 1936	
erection cost: \$38,435.20	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: James R. Hancock	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number T 71; Missouri Highway and Transportation Department, Primary System Bridge Record (see entries for Madison County), on file at MHTD, Jefferson City MO.	
sign. rating: 38	
evaluation: NRHP non-eligible (typical example of MSHD truss design of the 1920s and 1930s)	

inventoried by: Clayton B. Fraser 29 April 1993

Rock Creek Bridge

MADI05

GENERAL DATA

structure no.: 110000.1	city/town: 5.7 miles north of Fredericktown
county: Madison	feature inters.: Rock Creek
	cadastral grid: S20, T34N, R7E
	highway route: county road
	highway distr.: 10
	current owner: Madison County

STRUCTURAL DATA

superstructure: concrete deck girder	
substructure: concrete abutments and wingwalls	
span number: 1	condition: good
span length: 40.0'	alterations: none
total length: 43.0'	floor/decking : concrete deck
roadway width: 19.2'	other features: concrete guardrail with square balusters

HISTORICAL DATA

erection date: 1919	
erection cost: \$4320.00	
designer: Missouri State Highway Department	
fabricator : none	
contractor: Hogan and Humphreys, Little Rock AK (possible)	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 110000.1; Missouri State Highway Board, Second Biennial Report: 1919-20, pp. 129, 134; Third Biennial Report: 1921-22, n.p.	
sign. rating: 47	
evaluation: NRHP possibly eligible (one of oldest remaining examples of MSHD bridge design)	

inventoried by: Clayton B. Fraser 29 April 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Rock Creek Bridge
MHTD: 110000.1

MADI05

DATE(S) OF CONSTRUCTION

1919

LOCATION

county road over Rock Creek; S20, T34N, R7E
5.7 miles north of Fredericktown; Madison County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 47)

CONDITION

good

OWNER

Madison County

span number: 1	superstructure: concrete deck girder
span length: 40.0'	substructure: concrete abutments and wingwalls
total length: 43.0'	floor/decking: concrete deck
roadway wdt.: 19.2'	other features: concrete guardrail with square balusters

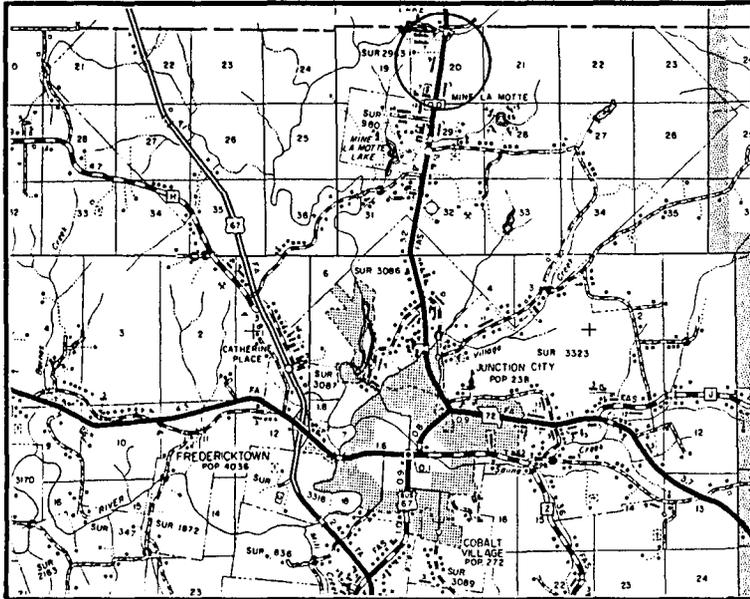
This modest concrete girder bridge carries a county road over Rock Creek north of Fredericktown. Although now a county-owned structure, the Rock Creek Bridge was designed and built by the Missouri State Highway Department in 1919 as a part of construction on State Highway Project 101 (later U.S. 67) through the center of Madison County. It and six other small-scale concrete spans were apparently completed that year, possibly by contractors Hogan and Humphreys of Little Rock, Arkansas. Cost of the Rock Creek Bridge: \$4320.00. It remains in unaltered condition.

One of the provisions of the Hawes Road Law establishing the Missouri State Highway Department was that the newly formed agency develop plans and specifications for bridges and culverts. "The Highway Department has maintained a drafting room which has been called upon for many kinds of service," the department reported in 1918, "but the especial function of which has been the preparation of bridge and culvert designs." By 1920, the department had developed several standards for short- and medium-span bridges, including 13 designs for steel superstructures with spans ranging up to 100 feet. In addition, the department delineated some 185 special bridge designs during the 1919-20 biennium. One of these was the Rock Creek Bridge in Madison County, designated Structure No. F-77. Although modest in its design and dimensions, this bridge is historically distinguished as one of the oldest remaining highway bridges designed by the state highway department. It is thus an important resource for interpreting MSHD's formative years and the early development of Missouri's state highway network.

NAME(S) OF STRUCTURE

Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 110000.1; Missouri State Highway Board, Second Biennial Report: 1919-20, pp. 129, 134.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

29 April 1993

MISSISSIPPI COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
*MISS01	K 950R	Cairo Bridge	4-700' riveted cantilever through truss 1929 American Bridge Company; Missouri Valley B&I Company
*MISS02	094000.7	Bridge	1- 70' pinned Pratt pony truss c1915
*MISS03	110000.0	Maple Slough Bridge	1- 50' pinned Pratt pony truss 1913 Vincennes Bridge Company
*MISS04	173001.3	Glory Bayou Bridge	1- 50' pinned Pratt pony truss c1915 Vincennes Bridge Company

EXCLUDED:

Pratt pony truss
033000.2

Warren pony truss
 F 757R1 F 785R F 786R1 F 788R1 H 282 059000.4 116000.4
 123000.0 125000.0

Steel stringer / girder
 F 57R F 58R F 758R1 J 638 K 816 K 887 S 437
 S 664 T 418 T 419 T 542 T 543 T 544 T 545
 T 744 T 745 X 358 X 364 X 395 X 396 Y 619
 Z 757 009000.1 025001.6 052001.3 067001.1 069R01.7 117001.5148R00.5

Concrete slab / girder
 F 759R2 F 760R J 117

Concrete box culvert
 H 460R 063003.2

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	3	0	0	4
Excluded	31	13	0	0	44
	32	16	0	0	48 structures

Cairo Bridge

MISS01

GENERAL DATA

structure no.:	K 950R	city/town:	Birds Point, Missouri / Cairo, Illinois
county:	Mississippi / Alexander	feature inters.:	Mississippi River
		cadastral grid:	S19, T27N, R18E
		highway route:	U.S. Highway 60 / U.S. Route 51
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department / Illinois Department of Public Works and Bridges

STRUCTURAL DATA

superstructure: steel, rigid-connected cantilevered through truss; 21 plate girder approach spans on Illinois side; 13 plate girder approach spans on Missouri side

substructure: concrete abutments, wingwalls and piers

span number:	4	condition:	good
span length:	700.0'	alterations:	deck replaced, 1981
total length:	5248.0'	floor/decking :	asphalt/concrete deck over steel stringers
roadway width:	20.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 channels with lacing, top and bottom; vertical: 4 angles with lacing (4 angles with continuous plate at some points); diagonal: 2 channels with double lacing; lateral bracing: 4 angles with lacing - top, 2 angles - bottom; strut: 2 angles with lacing and "X" bracing; portal strut: 2 angles with lacing; floor beam: plate girder; guardrail: 3 channels; Missouri approach bridge plate: American Bridge Co. USA 1928

HISTORICAL DATA

erection date: 1927-29

erection cost: \$3,109,311.86

designer: J.A.L. Waddell, Waddell and Hardesty

fabricator : American Bridge Company, New York NY; Illinois Steel Company, Chicago IL

contractor: American Bridge Company, New York NY (superstructure); Missouri Valley Bridge and Iron Company, Leavenworth KS (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 950R; Primary System Bridge Record - located at Bridge Division, Missouri Highway and Transportation Department, Jefferson City MO; Mississippi County Court Record, Book 10: page 55 (27 August 1909); Book 11: page 25 (2 September 1912); Book 12: page 62 (1 October 1919) - located at Mississippi County

Cairo Bridge

Courthouse, Charleston MO; **Chicago Tribune**: "Roads Converge Where Rivers Meet" (February 1939); **The Cairo Evening Citizen**: "Two Views of the Beautiful Bridge Spanning the Mississippi", page 1 (1 October 1929), "Dedication", pp. 1 and 4 (18 October 1929), "One-Year Closing Planned For Mississippi Bridge", n.p. (15 November 1929); **Charleston Express-Courier**: "County Fighting Biggest Flood Crest" page 1 (21 April 1927), "Work On Bridge Ready To Start With Low River", page 1 (23 June 1927); **Charleston Enterprise-Courier**: "May Build Piers This Summer For Bridge At Cairo", page 1 (20 January 1927); "Cairo is Laying Plans for Bridge Campaign", page 1 (13 January 1927); "Builders Making Steady Progress on Cairo Bridge", page 1 (1 September 1927); "Bridge Builders Add Night Crew to Expedite Job", page 1 (13 October 1927); "Engineering Work on Cairo Bridge Making Progress", page 1 (21 July 1927); "Cairo Bridge is Ready to Start", page 1 (19 May, 1927); "Bridge Worker Drowns in Fall From Barge", page 1 (29 December 1927); "Steel Work For Cairo Bridge to Begin March 1", page 1 (28 February 1928); "Charleston Will Join in Opening New Cape Bridge", page 1 (28 June 1928); field inspection by Richard Collier, 1 April 1992.

sign. rating: 71

evaluation: NRHP eligible (superlative example of large-scale highway truss design)

inventoried by: Clayton B. Fraser 4 May 1992

Bridge

MISS02

GENERAL DATA

structure no.:	094000.7	city/town:	9.3 miles southeast of East Prairie
county:	Mississippi	feature inters.:	St. Johns Diversion Ditch
		cadastral grid:	S3, T23N, R16E
		highway route:	County Road 94
		highway distr.:	10
		current owner:	Mississippi County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete abutments

span number:	1	condition:	fair
span length:	70.0'	alterations:	unknown
total length:	71.0'	floor/decking :	timber deck over steel stringers
roadway width:	14.0'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: square eyebar with turn-buckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 094000.7; Mississippi County Ditch Record S: n.p. (c1907) - located at Mississippi County Courthouse, Charleston MO; field inspection by Richard Collier, 1 April 1992.

sign. rating: 28
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 4 May 1992

Maple Slough Bridge

MISS03

GENERAL DATA

structure no.: 110000.0	city/town: 2.4 miles southwest of East Prairie
county: Mississippi	feature inters.: Maple Slough
	cadastral grid: S34, T25N, R15E
	highway route: County Road 110
	highway distr.: 10
	current owner: Mississippi County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete abutments

span number: 1	condition: fair
span length: 50.0'	alterations: none
total length: 51.0'	floor/decking : timber deck over steel stringers
roadway width: 14.1'	other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; bridge plate: Built by th...[broken] Vincennes Bridge...[broken] Vincennes Ind.

HISTORICAL DATA

erection date: 1913
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 110000.0; Mississippi County Ditch Record S: n.p. (c1907) - located Mississippi County Courthouse, Charleston MO; field inspection by Richard Collier, 1 April 1992.

sign. rating: 41
evaluation: NRHP non-eligible (typically configured example of common structural type)

Inventoried by: Clayton B. Fraser 4 May 1992

Glory Bayou Bridge

MISS04

GENERAL DATA

structure no.:	173001.3	city/town:	3.1 miles southeast of Wyatt
county:	Mississippi	feature inters.:	Glory Bayou
		cadastral grid:	S27, T26N, R17E
		highway route:	County Road 173
		highway distr.:	10
		current owner:	Mississippi County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: timber caps on mud sills

span number:	1	condition:	fair
span length:	50.0'	alterations:	unknown
total length:	50.0'	floor/decking :	timber deck over steel stringers
roadway width:	14.0'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; bridge plate: Built by the Vincennes Bridge Co. Vincennes Ind.

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN;
Carnegie Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 173001.3; Mississippi County Ditch Record S: n.p. (c1907) - located Mississippi County Courthouse, Charleston MO; field inspection by Richard Collier, 1 April 1992.

sign. rating: 35
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 4 May 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Cairo Bridge (Birds Point Bridge, Mississippi River Bridge)
MHTD: K 950R

MISS01

DATE(S) OF CONSTRUCTION

1927-29

LOCATION

U.S. Highway 60 / U.S. Route 51 over Mississippi River; S19, T27N, R18E
Birds Point, Missouri / Cairo, Illinois; Mississippi / Alexander County, Missouri

USE (ORIGINAL / CURRENT)

highway toll bridge / highway toll bridge

RATING NRHP eligible (score: 71)

CONDITION

good

OWNER

Missouri Highway and Transportation Department / Illinois Department of Public Works and Bridges

span number: 4
span length: 700.0'
total length: 5248.0'
roadway wdt.: 20.0'

superstructure: steel, rigid-connected cantilevered through truss; 21 plate girder approach spans on Illinois side; 13 plate girder approach spans on Missouri side
substructure: concrete abutments, wingwalls and piers
floor/decking: asphalt/concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 channels with lacing, top and bottom; vertical: 4 angles with lacing (4 angles with continuous plate at some points); diagonal: 2 channels with double lacing; lateral bracing: 4 angles with lacing - top, 2 angles - bottom; strut: 2 angles with lacing and "X" bracing; portal strut: 2 angles with lacing; floor beam: plate girder; guardrail: 3 channels; Missouri approach bridge plate: **American Bridge Co. USA 1928**

Cairo, Illinois, located at the confluence of the Mississippi and Ohio rivers, was faced with the problem of bridging not one, but two, major rivers to link with outlying areas. A railroad bridge over the Ohio was completed in October 1889 by the Illinois Central Railroad. Consisting of a series of pinned Whipple through trusses, supported by stone piers, it was the longest metallic bridge in the world when completed, and its 518-foot channel spans represented the ultimate extension of the Whipple truss. A vehicular bridge was a long time coming, however. While ferryboats carried wagons and cars across the two rivers, the citizens of Cairo hopefully promoted a single structure with a Y-shaped configuration, with one leg over the Mississippi and one over the Ohio. The structure would be paid for by the government, and its construction and maintenance costs would be defrayed by tolls.

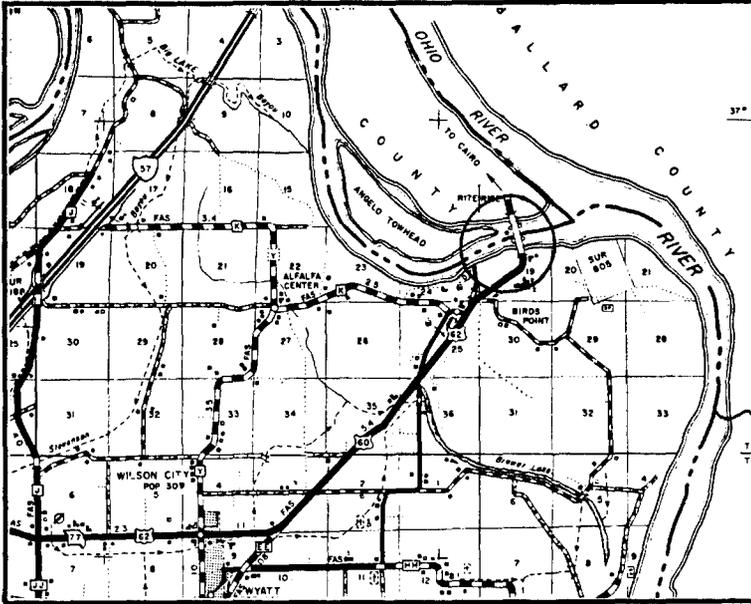
When the government was not forthcoming with the funds in the 1920s, the community instead turned to Harry E. Bovay, an Arkansas capitalist. Bovay had built one successful toll bridge in his home state, and he was looking for a larger bridge project, when he contacted the Cairo Chamber of Commerce. Under Bovay's direction, an organization was established to promote the bridge, a Congressional charter was secured, bonds were sold, and the venerable J.A.L. Waddell, of Waddell and Hardesty, was commissioned to design it. The contract for the substructure was awarded to the Missouri Valley Bridge and Iron Company of Leavenworth, Kansas, a veteran of several Mississippi and Missouri River bridge projects. The silicon steel superstructure was to be fabricated and erected by the American Bridge Company of New York.

Work on the piers began in July 1927. The channel piers were sunk with agonizing tedium by means of pneumatic caissons. Work on the cantilever spans began in 1928. "The steel work progressed much faster than the foundation work," reported the **Cairo Evening Citizen**. "You could almost see the bridge creep across the river. The span was cantilevered out over the water half way to the next pier, and a support was put in, resting upon a cluster of piles and the rest of the distance was jumped....There was no long stretch of piling filling the entire span, as in the construction of the Illinois Central bridge. The method of construction showed the progress made in bridge building between 1887 and 1927, forty years." After several weather-related delays, the trusses were completed and the bridge opened ceremoniously in October 1929. The original Cairo Bridge and Terminal Company operated it as a toll structure until the Cairo Bridge Commission acquired it in 1942. This quasi-public agency held the bridge until the bonds were retired in May 1954 and it was turned over to the states of Missouri and Illinois. The original deck was replaced in 1981, but the Birds Point Bridge remains otherwise intact as a pivotal interstate crossing.

Almost a mile long, the Cairo was a stunning achievement for the citizens in southern Illinois and the bootheel of Missouri - the fulfillment of some forty years of boasting. It played a critical role in transportation and commerce in a three-state region, as it linked Cairo with Missouri and Kentucky. The bridge is noteworthy as a superlative example of long-span truss construction. With its 700-foot, silicon steel spans, it is the longest of Missouri's cantilevered through trusses - a historically and technologically significant highway-related resource.

NAME(S) OF STRUCTURE

Cairo Bridge (Birds Point Bridge; Mississippi River Bridge)

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 950R; Primary System Bridge Record - located at Bridge Division, Missouri Highway and Transportation Department, Jefferson City MO; Mississippi County Court Record, Book 10: page 55 (27 August 1909); Book 11: page 25 (2 September 1912); Book 12: page 62 (1 October 1919) - located at Mississippi County Courthouse, Charleston MO; "One-Year Closing Planned For Mississippi Bridge", n.p. (15 November 1979); **Charleston Express-Courier**: "County Fighting Biggest Flood Crest" page 1 (21 April 1927), "Work On Bridge Ready To Start With Low River", page 1 (23 June 1927); **Charleston Enterprise-Courier**: "May Build Piers This Summer For Bridge At Cairo", page 1 (20 January 1927); "Cairo is Laying Plans for Bridge Campaign", page 1 (13 January 1927); "Builders Making Steady Progress on Cairo Bridge", page 1 (1 September 1927); "Cairo Bridge is Ready to Start", page 1 (19 May, 1927); "Steel Work For Cairo Bridge to Begin March 1", page 1 (28 February 1928); "Charleston Will Join in Opening New Cape Bridge", page 1 (28 June 1928).

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

4 May 1992

NEW MADRID COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	FHWA	Bridge Name	Description
*NEWM01	101R02.8	St. John's Bayou Bridge	1-140' pinned Camelback through truss 1917 Vincennes Bridge Company

EXCLUDED:

Warren pony truss
 G 52R H 323 J 18R

Steel stringer

F 204R	F 205R	F 206R	F 268R	G 51R	J 17R	J 258
J 259	J 260	K 787	L 219	L 220	L 221	L 222
L 223	L 224	L 225	L 226	L 227	L 228	L 236
L 237	L 238	S 217R1	S 443	S 661	S 612	S 676
T 37	T 253	T 254	T 639R	T 716	T 717	T 783
T 784	T 785	T 786	X 36	X 37	X 411	X 412
X 413	001002.4	048001.6	052R01.5	054001.7	102003.6	126000.0
126001.1	142001.1	193000.6	193002.4	232003.9	279001.0	326000.7
347000.6	349002.3	351000.6				

Concrete girder

H 849R	H 850R	H 815R	J 142	J 144	J 145	K 570
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Concrete slab

F 270R	J 977	S 215R1	S 216R1
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SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	1	0	0	1
Excluded	57	16	0	0	73
	57	17	0	0	74 structures

St. John's Bayou Bridge

NEWM01

GENERAL DATA

structure no.: 101R02.8 city/town: 3.9 miles northeast of New Madrid
county: New Madrid feature inters.: St. John's Bayou
cadastral grid: S29, T23N, R15W
highway route: county road
highway distr.: 10
current owner: New Madrid County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Camelback through truss
substructure: concrete and (recent) steel tube abutments

span number: 1 condition: good
span length: 140.0' alterations: one abutment replaced, 1980
total length: 144.0' floor/decking : timber deck over steel stringers
roadway width: 14.0' other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: 2 channels with lacing (2 angles with lacing at the hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing and 2-angle knee braces; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1917
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN;
Cambria Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 101R02.8; New Madrid County Court Record 12: page 435 (3 October 1916), page 571, located at New Madrid County Courthouse, New Madrid, Missouri; J.A.L. Waddell, **Bridge Engineering** (London: John Wiley and Sons, 1916), pages 477-78; field inspection by Richard Collier, 2 April 1992.
sign. rating: 54
evaluation: NRHP possibly eligible (well-preserved example of uncommon structural type)

inventoried by: Clayton B. Fraser 4 August 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

St. John's Bayou Bridge
MHTD: 101R02.8

NEWM01

DATE(S) OF CONSTRUCTION

1917

LOCATION

county road over St. John's Bayou; S29, T23N, R15W
3.9 miles northeast of New Madrid; New Madrid County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 54)

CONDITION

good

OWNER

New Madrid County

span number: 1

span length: 140.0'

total length: 144.0'

roadway wdt.: 14.0'

superstructure: steel, 8-panel, pin-connected Camelback through truss

substructure: concrete and (recent) steel tube abutments

floor/decking: timber deck over steel stringers

other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: 2 channels with lacing (2 angles with lacing at the hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing and 2-angle knee braces; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

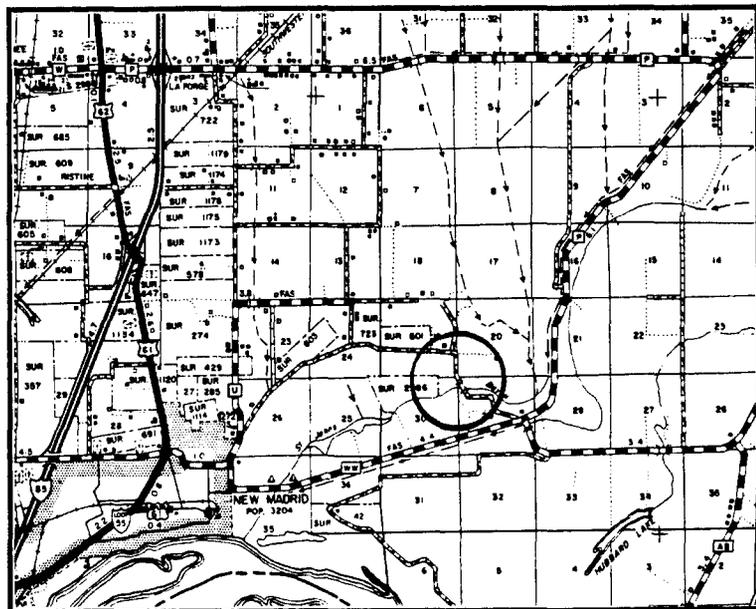
In August 1916 the New Madrid County Court received a petition from W.D. Knott et al. for the platting of a new road in New Madrid Township. The road was established that October. County records are somewhat sketchy - several bridges were being built at the time over St. John's Bayou, a tributary of the Mississippi River - but it appears that in 1917 this bridge was constructed to carry the new road over the bayou some four miles northeast of New Madrid. Consisting of a single, pinned through truss, the long-span structure was fabricated and erected by the Vincennes Bridge Company of Vincennes IN, which was essentially New Madrid County's sole bridge contractor in the 1910s. The St. John's Bayou Bridge carried traffic without serious alteration for decades and is today the county's oldest vehicular bridge. Its original concrete abutment on the south was replaced by steel tubes after the bridge fell into the bayou in 1980, but the superstructure itself remains unaltered.

Straight-chorded Pratt through trusses were used extensively throughout Missouri for medium-span crossings in the late 19th and 20th centuries. For longer crossings after about the turn of the century, however, bridge companies could develop greater efficiency with polygonal-chorded Pratt variants - primarily Parker, Pennsylvania and Camelback trusses. With its distinctive five-faceted upper chords, the Camelback configuration was disdained by some engineers (including the redoubtable J.A.L. Waddell, who called it "uncompromisingly ugly") for its tendency under certain conditions to reverse compressive and tensile forces acting on their individual members. As a result, Camelback trusses never received widespread acceptance. Relatively few were ever built on Missouri's roads, and less than ten have been identified as extant by the bridge inventory. The St. John's Bayou Bridge is thus technologically significant as a well-preserved example of this uncommon structural type.

NAME(S) OF STRUCTURE

St. John's Bayou Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 101R02.8; New Madrid County Court Record 12: page 435 (3 October 1916), page 571, located at New Madrid County Courthouse, New Madrid, Missouri; J.A.L. Waddell, *Bridge Engineering* (London: John Wiley and Sons, 1916), pages 477-78; field inspection by Carl McWilliams and Richard Collier, 2 April 1992.

INVENTORIED BY

Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

4 May 1992

PEMISCOT COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
PEMI01	105000.0	Bridge	1-100' pinned Pratt through truss c1910

EXCLUDED:

Steel stringer

F 245R	F 494R1	F 495R1	F 496R1	G 456R	G 457R	G 458R
H 187	K 55R	K 59R	K 800	K 850	K 866	K 867
L 239	L 272	L 349	L 350	S 175	S 706	S 707
S 712	S 713	S 714	S 715	S 716	S 736	S 737
S 738	S 845	S 883	T 142	T 143	T 536	T 537
T 538	T 696	T 697	T 698	T 910	T 911	X 25
X 26	X 34	X 500	X 509	X 938	X 939	0020003
022000.5	360000.6					

Concrete girder

J 291R1 J 292R

Concrete slab

H 188R 007000.5 146000.5 146001.5

Concrete box culvert

G 790R1

Timber stringer

004001.5	006000.5	007001.5	012000.5	013001.0	017000.5	017001.5
019000.5	022001.5	025000.9	028000.6	029000.8	030000.6	032001.2
033001.8	033002.8	034001.4	035002.0	036000.5	037001.0	038001.0
039002.0	039003.0	043000.5	044000.5	044001.2	045000.6	048500.1
054000.7	056000.8	099000.7	104000.8	106000.0	141R02.1	145001.0
178001.7	189000.1	190000.1	193001.0	212000.5	219000.0	222000.5
238001.8	241000.0	255000.1	258001.0	259001.0	263001.5	263002.9
266000.4	269001.5	271001.1	279000.2	287000.1	298002.0	301000.9
314000.6	318000.4	318001.9	321000.8	323000.5	325000.4	328000.4
331000.8	333001.7	340001.3	341001.0	342001.0	342002.0	351000.5
353000.9	357000.1	4100R0.2	410000.1			

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	1	0	0	1
Excluded	52	80	0	0	132
	52	81	0	0	133 structures

Bridge

PEMI01

GENERAL DATA

structure no.:	105000.0	city/town:	southern of Wardell
county:	Pemiscot	feature inters.:	drainage ditch
		cadastral grid:	S25/26, T20N, R11E
		highway route:	County Road 105
		highway distr.:	10
		current owner:	Pemiscot County

STRUCTURAL DATA

superstructure:	steel, 6-panel, pin-connected Pratt through truss		
substructure:	concrete-filled steel cylinder pier, with timber pile bent abutments		
span number:	1	condition:	fair
span length:	100.0'	alterations:	unknown
total length:	133.0'	floor/decking :	timber deck
roadway width:	11.0'	other features:	unknown

HISTORICAL DATA

erection date:	c1910
erection cost:	unknown
designer:	unknown
fabricator :	unknown
contractor:	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 105000.0.

sign. rating:	25
evaluation:	NRHP non-eligible (typically configured example of common structural type)

Inventoried by: Clayton B. Fraser 5 June 1992

PERRY COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
PERR01	042000.0	Bridge	1- 45' pinned Pratt half-hip pony truss c1910
PERR02	047000.1	Laurent Creek Bridge	1- 45' pinned Pratt bedstead c1910
PERR03	142000.4	Omette Creek Bridge	1- 80' pinned Pratt through truss c1905

EXCLUDED:

Pratt pony truss
078001.0

Warren pony truss
H 519 H 919 029002.6 031001.9 088000.9

Steel stringer / girder
 S 177 S 732 S 733 S 734 035003.7 040000.2 041001.3
 047000.4 075001.4 088001.4 101002.2 149000.4 172000.3 175003.9
 177R00.4 197001.9 197002.2 200000.8 200003.0 200003.2 201000.7
 207000.5 210001.5 238000.9 258002.1 273001.6

Concrete girder
H 65 T 761

Concrete slab
Y 613 078000.0 088000.5 135001.5 135001.6 136000.8 150001.6
183R02.5 186001.1 193000.4 200001.3 253000.5

Concrete box culvert
J 711 L 371 T 13 X 74

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	3	0	0	3
Excluded	12	37	1	0	50
	12	40	1	0	53 structures

Bridge

PERR01

GENERAL DATA

structure no.:	042000.0	city/town:	8.1 miles south of Perryville
county:	Perry	feature inters.:	tributary of Blue Springs Branch
		cadastral grid:	S12, T36N, R10E
		highway route:	county road
		highway distr.:	10
		current owner:	Perry County

STRUCTURAL DATA

superstructure:	steel, 3-panel, pin-connected Pratt pony truss		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	fair
span length:	45.0'	alterations:	unknown
total length:	45.0'	floor/decking :	concrete deck over steel stringers
roadway width:	11.8'	other features:	unknown

HISTORICAL DATA

erection date:	c1910
erection cost:	unknown
designer:	unknown
fabricator :	unknown
contractor:	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 042000.0.

sign. rating:	25
evaluation:	NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 16 January 1992

Laurent Creek Bridge

PERR02

GENERAL DATA

structure no.:	047000.1	city/town:	10.7 miles northwest of Perryville
county:	Perry	feature inters.:	Laurent Creek
		cadastral grid:	S5, T36N, R10E
		highway route:	county road
		highway distr.:	10
		current owner:	Perry County

STRUCTURAL DATA

superstructure:	steel, 3-panel, pin-connected Pratt truss-leg bedstead		
substructure:	truss leg piers with timber back- and wingwalls		
span number:	1	condition:	fair
span length:	45.0'	alterations:	unknown
total length:	46.0'	floor/decking :	concrete deck over steel stringers
roadway width:	12.0'	other features:	cover plates on end posts

HISTORICAL DATA

erection date:	c1910
erection cost:	unknown
designer:	unknown
fabricator :	unknown
contractor:	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 047000.1.

sign. rating:	25
evaluation:	NRHP determined non-eligible (typical example of common structural type)

Inventoried by: Clayton B. Fraser 16 January 1992

Omette Creek Bridge

PERR03

GENERAL DATA

structure no.: 142000.4	city/town: 10.4 miles east of Perryville
county: Perry	feature inters.: Omette Creek
	cadastral grid: S14, T35N, R12E
	highway route: county road
	highway distr.: 10
	current owner: Perry County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss	
substructure: concrete-filled steel cylinder piers with timber backwalls	
span number: 1	condition: fair
span length: 80.0'	alterations: unknown
total length: 81.0'	floor/decking : timber deck over steel stringers
roadway width: 14.0'	other features: steel pipe guardrails

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : unknown
contractor : unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 142000.4.

sign. rating: 30
evaluation: NRHP determined non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 16 January 1992

SCOTT COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv.No.	MHTD	Bridge Name	Description
SCOT01	G 438R	North Cut Ditch Bridge	1-100' riveted Pratt through truss 1923 Glen E. Stoner
*SCOT02	043000.5	Ramsey Branch Bridge	1- 32' concrete deck girder 1919 Stanford Madden
*SCOT03	066000.3	Henderson Branch Bridge	1- 20' concrete slab 1919 Stanford Madden

EXCLUDED:

Pratt pony truss
187002.7

Warren pony truss
150000.8

Steel stringer

H 335R2	H 336R	J 662R	K 522R	L 270	L 271	L 299
L 300	S 167	S 615	S 616	S 665	S 666	S 667
S 668	S 673	S 743	S 744	S 745	S 970	S 971
S 972	T 341	T 417	T 760	X 381	067001.3	105R03.1
160001.0	162001.0	167000.9	179000.7	207001.9	323000.1	

Concrete girder

J 312R1	J356R1	J384R	J 899
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Concrete slab

F 52R	F53R	J 742	L 280R
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Concrete box culvert

G 828	H 317R	J 313	J 314R	J 385	N 760	S 939
T 416	T 759R					

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	2	0	0	3
Excluded	43	10	0	0	53
	44	12	0	0	56

North Cut Ditch Bridge

SCOT01

GENERAL DATA

structure no.: G 438R	city/town: 4.6 miles southeast of Benton
county: Scott	feature inters.: North Cut Ditch
	cadastral grid: S9, T27N, R15W
	highway route: Missouri State Highway 77
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt through truss	
substructure: concrete abutments and wingwalls	
span number: 1	condition: good
span length: 100.0'	alterations: unknown
total length: 104.0'	floor/decking : concrete deck over steel stringers
roadway width: 20.0'	other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1923	
erection cost: \$17,883.70	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: Glen E. Stoner	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. G 438R; Missouri Highway and Transportation Department, Primary System Record, located at Bridge Division, MHTD, Jefferson City MO.	
sign. rating: 36	
evaluation: NRHP non-eligible (typically configured example of MSHD through truss design)	

Inventoried by: Clayton B. Fraser 1 September 1992

Ramsey Branch Bridge

SCOT02

GENERAL DATA

structure no.: 043000.5	city/town: 7.3 miles north of Benton
county: Scott	feature inters.: Ramsey Branch
	cadastral grid: S6, T29N, R14W
	highway route: 10
	highway distr.: County Road 43
	current owner: Scott County

STRUCTURAL DATA

superstructure: concrete deck girder	
substructure: concrete abutments and wingwalls	
span number: 1	condition: good
span length: 32.0'	alterations: none
total length: 33.0'	floor/decking : concrete
roadway width: 18.0'	other features: MSHD concrete guardrails with square balusters

HISTORICAL DATA

erection date: 1919	
erection cost: \$3196.14	
designer: Missouri State Highway Department	
fabricator : none	
contractor: Stanford Madden	
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 043000.5; Missouri Highway and Transportation Department, Primary Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; Missouri State Highway Board, Second Biennial Report: 1919-20, pp. 129, 134.
sign. rating: 47	
evaluation:	NRHP possibly eligible (one of oldest remaining examples of MSHD bridge design)

inventoried by: Clayton B. Fraser 1 September 1992

Henderson Branch Bridge

SCOT03

GENERAL DATA

structure no.: 066000.3	city/town: 1.1 mile southwest of Benton
county: Scott	feature inters.: Henderson Branch Drainage Ditch
	cadastral grid: 13S, 28TN, 13RW
	highway route: 10
	highway distr.: County Road 66
	current owner: Scott County

STRUCTURAL DATA

superstructure: concrete slab	
substructure: concrete abutments and wingwalls	
span number: 1	condition: good
span length: 20.0'	alterations: none
total length: 22.0'	floor/decking : concrete deck
roadway width: 17.8'	other features: MSHD standard concrete guardrails with square balusters

HISTORICAL DATA

erection date: 1919	
erection cost: \$1749.77	
designer: Missouri State Highway Department	
fabricator : none	
contractor: Stanford Madden	
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 066000.3; Missouri Highway and Transportation Department, Primary Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; Missouri State Highway Board, Second Biennial Report: 1919-20, pp. 129, 134.
sign. rating: 47	
evaluation:	NRHP possibly eligible (one of oldest remaining MSHD highway bridges)

inventoried by: Clayton B. Fraser 1 September 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Ramsey Branch Bridge
MHTD: 043000.5

SCOT02

DATE(S) OF CONSTRUCTION

1919

LOCATION

10 over Ramsey Branch; S6, T29N, R14W
7.3 miles north of Benton; Scott County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / roadway bridge

RATING NRHP possibly eligible (score: 47)

CONDITION

good

OWNER

Scott County

span number:	1	superstructure:	concrete deck girder
span length:	32.0'	substructure:	concrete abutments and wingwalls
total length:	33.0'	floor/decking:	concrete
roadway wdt.:	18.0'	other features:	MSHD concrete guardrails with square balusters

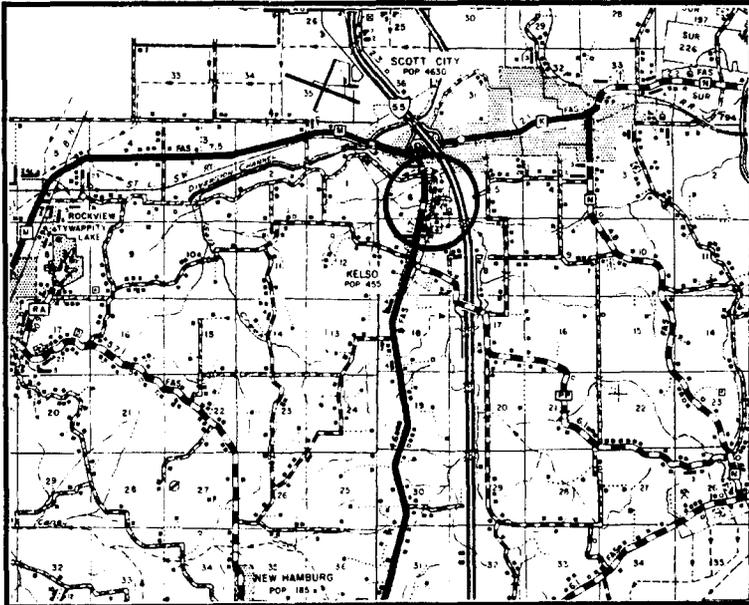
This modest concrete girder bridge carries a county road over Ramsey Branch north of Benton. Although now a county-owned structure, the Ramsey Branch Bridge was designed and built by the Missouri State Highway Department in 1919 as a part of construction on State Highway 10 (later U.S. 61) through the center of Scott County. That July the state contracted with Stanford Madden to build this and three other small-scale spans (including SCOT03). Madden apparently completed the bridges that year. Cost of the Ramsey Branch Bridge: \$3196.14. It remains in unaltered condition.

One of the provisions of the Hawes Road Law establishing the Missouri State Highway Department was that the newly formed agency develop plans and specifications for bridges and culverts. "The Highway Department has maintained a drafting room which has been called upon for many kinds of service," the department reported in 1918, "but the especial function of which has been the preparation of bridge and culvert designs." By 1920, the department had developed several standards for short- and medium-span bridges, including 13 designs for steel superstructures with spans ranging up to 100 feet. In addition, the department delineated some 185 special bridge designs during the 1919-20 biennium. One of these was the Ramsey Branch Bridge in Scott County, designated Structure No. F-70. Although modest in its design and dimensions, this bridge is historically distinguished as one of the two oldest remaining highway bridges designed by the state highway department. (The other - SCOT03 - was built under the same construction contract in 1919.) It is thus an important resource for interpreting MSHD's formative years and the early development of Missouri's state highway network.

NAME(S) OF STRUCTURE

Ramsey Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 043000.5; Missouri Highway and Transportation Department, Primary Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; Missouri State Highway Board, Second Biennial Report: 1919-20, pp. 129, 134.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

1 September 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Henderson Branch Bridge
MHTD: 066000.3

SCOT03

DATE(S) OF CONSTRUCTION

1919

LOCATION

10 over Henderson Branch Drainage Ditch; 13S, 28TN, 13RW
1.1 mile southwest of Benton; Scott County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / roadway bridge

RATING NRHP possibly eligible (score: 47)

CONDITION

good

OWNER

Scott County

span number:	1	superstructure:	concrete slab
span length:	20.0'	substructure:	concrete abutments and wingwalls
total length:	22.0'	floor/decking:	concrete deck
roadway wdt.:	17.8'	other features:	MSHD standard concrete guardrails with square balusters

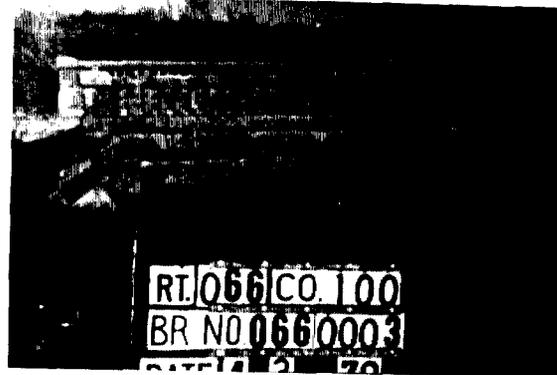
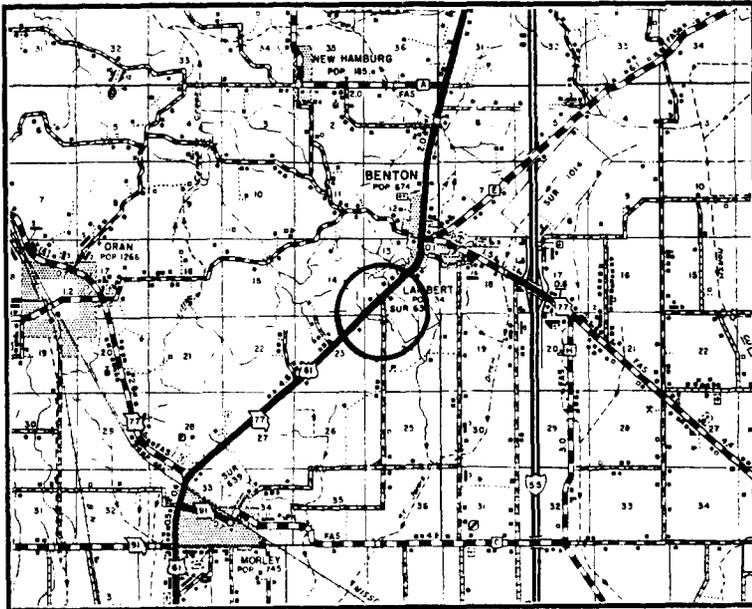
This modest concrete slab bridge carries a county road over Henderson Branch southwest of Benton. Although now a county-owned structure, the Henderson Branch Bridge was designed and built by the Missouri State Highway Department in 1919 as a part of construction on State Highway 10 (later U.S. 61) through the center of Scott County. That July the state contracted with Stanford Madden to build this and three other small-scale spans (including SCOT02). Madden apparently completed the bridges that year. Cost of the Henderson Branch Bridge: \$1749.77. It remains in unaltered condition.

One of the provisions of the Hawes Road Law establishing the Missouri State Highway Department was that the newly formed agency develop plans and specifications for bridges and culverts. "The Highway Department has maintained a drafting room which has been called upon for many kinds of service," the department reported in 1918, "but the especial function of which has been the preparation of bridge and culvert designs." By 1920, the department had developed several standards for short- and medium-span bridges, including 13 designs for steel superstructures with spans ranging up to 100 feet. In addition, the department delineated some 185 special bridge designs during the 1919-20 biennium. One of these was the Henderson Branch Bridge in Scott County, designated Structure No. F-64. Although modest in its design and dimensions, this bridge is historically distinguished as one of the two oldest remaining highway bridges designed by the state highway department. (The other - SCOT02 - was built under the same construction contract in 1919.) It is thus an important resource for interpreting MSHD's formative years and the early development of Missouri's state highway network.

NAME(S) OF STRUCTURE

Henderson Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 066000.3; Missouri Highway and Transportation Department, Primary Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; Missouri State Highway Board, Second Biennial Report: 1919-20, pp. 129, 134.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

1 September 1992

STE. GENEVIEVE COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
SAGE01	H 63	Auxvasse River Bridge	1-140' riveted Parker through truss 1926 Public Works Construction Co.
SAGE02	H 64	Saline Creek Bridge	1-150' riveted Parker through truss 1926 Public Works Construction Co.
SAGE03	J 745	Establishment Creek Bridge	2-120' riveted Pratt through truss 1931 W.F. Fogleman
SAGE04	X 67	Auxvasse River Bridge	1-140' riveted Pratt through truss 1936 C.H. Atkinson Paving Company
SAGE05	X 393R	Mississippi Riv. Ch. Bridge	2-180' riveted Pratt through truss 1935
SAGE06	X 421	Saline Creek Bridge	3-105' steel stringer 1948 W.J. Menefee Construction Co.
SAGE07	043000.6	Terre Bleue Creek Bridge	1- 70' pinned Pratt pony truss c1910

EXCLUDED:

Warren pony truss
384700.8

Steel stringer
K 748 S 652 S 685 T 121 384700.3 388000.1

Concrete slab / girder
J 63R J 911 K 251 X 959 002002.3 004006.3 048001.7
060005.7 072002.5 073000.4 141000.7 384700.1 384700.2 384700.7

Concrete box culvert
J 910 T 120 T 201 T 288 X 472 X 958

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	6	1	0	0	7
Excluded	14	13	0	0	27
	20	14	0	0	34 structures

Auxvasse River Bridge

SAGE01

GENERAL DATA

structure no.:	H 63	city/town:	1.6 miles northwest of Hicks
county:	Ste. Genevieve	feature inters.:	Auxvasse River
		cadastral grid:	S12, T37N, R9E
		highway route:	U.S. Highway 61
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 8-panel, rigid-connected Parker through truss; 2, rigid-connected, Warren pony truss approach spans		
substructure:	concrete abutments, wingwalls and piers		
span number:	1	condition:	good
span length:	140.0'	alterations:	none
total length:	268.0'	floor/decking :	concrete deck over steel stringers
roadway width:	20.0'	other features:	steel pipe guardrail

HISTORICAL DATA

erection date:	1925-26
erection cost:	\$31,561.07
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Public Works Construction Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. H 63; Missouri Primary System Bridge Record, located at Missouri Highway and Transportation Department, Jefferson City MO; Fifth Biennial Report of the State Highway Commission of Missouri (1925-26) , page 213.
sign. rating:	39
evaluation:	NRHP non-eligible (typically configured, undistinguished example of MSHD standard highway truss design)

Inventoried by: Michelle Crow-Dolby 5 May 1993

Saline Creek Bridge

SAGE02

GENERAL DATA

structure no.:	H 64	city/town:	Hicks
county:	Ste. Genevieve	feature inters.:	Saline Creek
		cadastral grid:	S19, T37N, R10E
		highway route:	U.S. Highway 61
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Parker through truss; 2, rigid-connected, Warren pony truss approach spans

substructure: concrete abutments, wingwalls and piers

span number:	1	condition:	good
span length:	150.0'	alterations:	none
total length:	288.0'	floor/decking :	concrete deck over steel stringers
roadway width:	20.0'	other features:	steel pipe guardrails

HISTORICAL DATA

erection date: 1925-26

erection cost: \$34,840.85

designer: Missouri State Highway Department

fabricator : unknown

contractor: Public Works Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. H 64; Missouri Primary System Bridge Record, located at Missouri Highway and Transportation Department, Jefferson City MO; **Fifth Biennial Report of the State Highway Commission of Missouri** (1925-26), page 213.

sign. rating: 39

evaluation: NRHP non-eligible (typically configured, undistinguished example of-MSHD standard highway truss design)

Inventoried by: Michelle Crow-Dolby 5 May 1993

Establishment Creek Bridge

SAGE03

GENERAL DATA

structure no.: J 745	city/town: 1.0 mile east of Bloomsdale
county: Ste. Genevieve	feature inters.: Establishment Creek
	cadastral grid: S13/18, T38N, R7/8E
	highway route: U.S. Highway 61
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, rigid-connected Pratt through truss	
substructure: concrete abutments, wingwalls and pier	
span number: 2	condition: good
span length: 120.0'	alterations: none
total length: 246.0'	floor/decking : concrete deck over steel stringers
roadway width: 20.0'	other features: steel pipe guardrail

HISTORICAL DATA

erection date: 1931	
erection cost: \$26,350.09	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor : W.F. Fogleman	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. J 745; Missouri Primary System Bridge Record, located at Missouri Highway and Transportation Department, Jefferson City MO	
sign. rating: 41	
evaluation: NRHP non-eligible (typically configured example of MSHD standard highway truss design)	

inventoried by: Michelle Crow-Dolby 5 May 1993

Auxvasse River Bridge

SAGE04

GENERAL DATA

structure no.: X 67	city/town: 7.7 miles northeast of Coffman
county: Ste. Genevieve	feature inters.: Auxvasse River
	cadastral grid: S25/26, T37N, R8E
	highway route: County Road B
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Pratt through truss; 2 steel stringer approach spans	
substructure: concrete abutments, wingwalls and piers	
span number: 1	condition: good
span length: 140.0'	alterations: none
total length: 231.0'	floor/decking : concrete deck over steel stringers
roadway width: 20.0'	other features: steel angle guardrail

HISTORICAL DATA

erection date: 1936	
erection cost: \$22,855.10	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: C.H. Atkinson Paving Company	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. X 67; Missouri Primary System Bridge Record, located at Missouri Highway and Transportation Department, Jefferson City MO	
sign. rating: 39	
evaluation: NRHP non-eligible (typically configured example of MSHD standard highway truss design)	

inventoried by: Michelle Crow-Dolby 5 May 1993

Mississippi River Channel Bridge

SAGE05

GENERAL DATA

structure no.:	X 393R	city/town:	St. Marys
county:	Ste. Genevieve	feature inters.:	Mississippi River channel
		cadastral grid:	S28, T37N, R10E
		highway route:	Missouri State Supplementary Route U
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, rigid-connected Pratt through truss		
substructure:	concrete abutments, wingwalls and pier		
span number:	2	condition:	good
span length:	180.0'	alterations:	none
total length:	360.0'	floor/decking :	concrete on corrugated metal deck, over steel stringers
roadway width:	15.0'	other features:	steel angle guardrail

HISTORICAL DATA

erection date:	1935
erection cost:	unknown
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	unknown
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. X 393R; Missouri Primary System Bridge Record, located at Missouri Highway and Transportation Department, Jefferson City MO.
sign. rating:	37
evaluation:	NRHP non-eligible (typically configured, partially documented, example of MSHD standard highway truss design)

inventoried by: Michelle Crow-Dolby 5 May 1993

Saline Creek Bridge

SAGE06

GENERAL DATA

structure no.: X 421	city/town: 3.5 miles southwest of St. Marys
county: Ste. Genevieve	feature inters.: Saline Creek
	cadastral grid: S1, T36N, R9E
	highway route: County Road Z
	highway distr.: 10
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: continuous steel stringer, skewed	
substructure: concrete abutments, wingwalls and piers	
span number: 3	condition: good
span length: 105.0'	alterations: none
total length: 283.0'	floor/decking : concrete deck
roadway width: 20.0'	other features: steel angle guardrail

HISTORICAL DATA

erection date: 1948	
erection cost: \$70,392.80	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor: W.J. Menefee Construction Company	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. X 421; Missouri Primary System Bridge Record, located at Missouri Highway and Transportation Department, Jefferson City MO.	
sign. rating: 37	
evaluation: NRHP non-eligible (typically configured, long-span example of MSHD highway beam design)	

inventoried by: Michelle Crow-Dolby 5 May 1993

Terre Bleue Creek Bridge

SAGE07

GENERAL DATA

structure no.: 043000.6	city/town: 1.3 miles west of Thurman
county: Ste. Genevieve	feature inters.: Terre Bleue Creek
	cadastral grid: S18, T37N, R5E
	highway route: County Road 43
	highway distr.: 10
	current owner: Ste. Genevieve County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans	
substructure: unknown	
span number: 1	condition: fair
span length: 70.0'	alterations: none
total length: 131.0'	floor/decking : corrugated steel deck
roadway width: 10.3'	other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 043000.6.

sign. rating: 28

evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Michelle Crow-Dolby 5 May 1993

ST. FRANCOIS COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
SAFR01	Y 658	Loughboro Bridge	(replaced)
SAFR02	Z 534	Bannon Branch Bridge	(replaced)
*SAFR03	053000.2	Terre Bleue Bridge	9- 30' 1935 stone arch / steel stringer
SAFR04	125000.6	Taylor Branch Bridge	(replaced)
*SAFR05	132000.1	East Main Street Bridge	3- 33' c1920 concrete filled spandrel arch
SAFR06	149000.2	Bridge	2- 13' 1917 concrete slab road district work force
*SAFR07	175001.8	Barnhouse Ford Bridge	1-100' 1910 pinned Pratt through truss Stupp Bros. Bridge & Iron Co.
*SAFR08	269002.6	Big River Bridge	1-150' 1924 riveted Parker through truss Public Works Construction Co.
*SAFR09	270006.1	Big River Bridge	1-120' 1924 riveted Pratt through truss Public Works Construction Co.

EXCLUDED:

Pratt pony truss
 H 291A 128000.4

Steel stringer

G 843R	T 251	T 397	W 175	003000.9	043000.5	131000.4
134000.1	134000.2	135000.2	140001.1	140001.4	141000.8	144002.2
151003.6	174002.1	188000.6	211001.9	218000.3	230000.2	275000.3

Concrete girder

G 837	H 488R	H 500R	H 501R	H 841	J 999	K 401
L 283	L 329	068000.4	101003.5	268001.0	268001.1	

Concrete slab

L 353	027000.8	027001.1	030000.2	030000.4	037001.4	074002.0
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Concrete slab

074002.7	096001.0	099001.4	145000.1	148000.7	149001.0	151003.0
195001.7	195003.9	207000.3	219001.2	241300.1	274000.3	276001.1

Concrete box culvert

H 487	H 502	J 998	L 247	L 257	T 115	T 473
T 976	X 476	Y 935	0110001	101000.5	174000.6	193000.3
209000.1	219001.9	2210026	2413002	241300.3	267001.6	269001.6
127000.5	127001.3	130000.6	132001.2	132003.6	134000.8	157001.0

ST. FRANCOIS COUNTY

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	6	0	0	6
Excluded	25	53	0	0	78
<hr/>					
	25	59	0	0	84 structures

Terre Bleue Bridge

SAFR03

GENERAL DATA

structure no.:	053000.2	city/town:	4.7 miles east of Bonne Terre
county:	St. Francois	feature inters.:	Terre Bleue Creek
		cadastral grid:	S10/15, T37N, R5E
		highway route:	County Road 53
		highway distr.:	10
		current owner:	St. Francois County

STRUCTURAL DATA

superstructure: stone arch; concrete slab approach spans at one end
substructure: stone

span number:	7; 2	condition:	good
span length:	30.0'	alterations:	none
total length:	203.0'	floor/decking :	unknown
roadway width:	20.0'	other features:	unknown

HISTORICAL DATA

erection date: 1935
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: Civilian Conservation Corps (possible)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 053000.2; field inspection by Clayton Fraser, 7 September 1991.

sign. rating: 50
evaluation: NRHP possibly eligible (excellent example of unusual structural configuration)

inventoried by: Clayton B. Fraser 14 July 1993

East Main Street Bridge

SAFR05

GENERAL DATA

structure no.: 132000.1 city/town: Elvins
county: St. Francois feature inters.: Flat River
cadastral grid: S18, T36N, R5E
highway route: East Main Street
highway distr.: 10
current owner: St. Francois County

STRUCTURAL DATA

superstructure: concrete filled spandrel arch
substructure: stone piers and abutments

span number: 3 condition: fair
span length: 33.0' alterations: none
total length: 100.0' floor/decking : concrete deck over earth fill
roadway width: 32.2' other features: steel pipe guardrails; sidewalk on both sides

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: unknown
fabricator : none
contractor : unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 132000.1; field inspection by Clayton Fraser, 7 September 1991.

sign. rating: 28
evaluation: NRHP non-eligible (undistinguished, small-scale example of common structural type, poorly documented)

inventoried by: Clayton B. Fraser 14 July 1993

Bridge

SAFR06

GENERAL DATA

structure no.: 149000.2 city/town: 10.6 miles southeast of Farmington
county: St. Francois feature inters.: branch of Little St. Francis River
cadastral grid: S33, T35N, R7E
highway route: County Road 149
highway distr.: 10
current owner: St. Francois County

STRUCTURAL DATA

superstructure: concrete slab
substructure: concrete abutments, wingwalls and piers

span number: 2 condition: fair
span length: 13.0' alterations: none
total length: 30.0' floor/decking : concrete deck
roadway width: 20.0' other features: concrete curb without guardrails

HISTORICAL DATA

erection date: 1917
erection cost: unknown
designer: unknown
fabricator : none
contractor: road district work force (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 149000.2.

sign. rating: 37
evaluation: NRHP non-eligible (early example of mainstay structural type, technologically and historically undistinguished)

inventoried by: Clayton B. Fraser 14 July 1993

Barnhouse Ford Bridge

SAFR07

GENERAL DATA

structure no.: 175001.8 city/town: 5.7 miles southwest of Farmington
county: St. Francois feature inters.: Doe Run Creek
cadastral grid: S28, T35N, R5E
highway route: County Road 175
highway distr.: 10
current owner: St. Francois County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1 condition: fair
span length: 100.0' alterations: deck replaced, 1975
total length: 105.0' floor/decking : asphalt-covered corrugated steel over steel stringers
roadway width: 13.7' other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; bridge plate: 1910 / BUILT BY STUPP BRO'S / BRIDGE & IRON CO. / ST. LOUIS MO. / J.D. MITCHELL / PRESIDING JUDGE / T.K. BARNETT / A.W. KINZER / ASSOCIATE JUDGES / J.A. LAWRENCE / COUNTY CLERK / THOS. HOLMAN / HIGHWAY ENGINEER; welded on endpost: new floor 10-1-75

HISTORICAL DATA

erection date: 1910
erection cost: \$2800.00 (contract amount)
designer: Stupp Brothers Bridge & Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge & Iron Company, St. Louis MO;
Cambria Steel Company, Pittsburgh PA
contractor: Stupp Brothers Bridge & Iron Company, St. Louis MO
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 175001.8; St. Francois County Court Record, Book P: page 487 (14 April 1910), page 488 (15 April 1910), page 539 (7 June 1910), page 549 (16 June 1910), page 598 (11 Nov

Barnhouse Bridge

ember 1910), page 620 (21 December 1910); St. Francois County Court Record, Book Q: page 125 (3 May 1911) - located at the St. Francois County Courthouse, Farmington MO; field inspection by Clayton Fraser, 7 September 1991.

sign. rating: 43

evaluation: NRHP non-eligible (typical example of common structural type, built relatively late in the milieu of pinned truss construction)

inventoried by: Clayton B. Fraser 14 July 1993

Big River Bridge

SAFR08

GENERAL DATA

structure no.: 269002.6 city/town: 1.5 miles northwest of Desloge
county: St. Francois feature inters.: Big River
cadastral grid: S29, T37N, R5E
highway route: County Road 269
highway distr.: 10
current owner: St. Francois County

STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Parker through truss; 8 concrete deck girder approach spans at the north end
substructure: concrete abutments, wingwalls and piers

span number: 1 condition: good
span length: 150.0' alterations: none
total length: 366.0' floor/decking : concrete deck and curbing over steel stringers
roadway width: 20.2' other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; strut: 2 braced angles; floor beam: I-beam, field-bolted to vertical; guardrail: 2 steel pipes; bridge plate: MISSOURI HIGHWAY DEPT. / BRIDGE No. G 848 / 1924

HISTORICAL DATA

erection date: 1924
erection cost: \$36,961.45
designer: Missouri State Highway Department
fabricator : Inland Steel Company, East Chicago IN
contractor : Public Works Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 269002.6; Primary System Bridge files, St. Francois County, located at Missouri Highway and Transportation Department, Jefferson City MO; Missouri State Highway Commission, **Third Biennial Report: 1921-22**, page 144; Missouri State Highway Commission, **Fourth Biennial Report: 1923-24**, page 175; field inspection by Clayton Fraser, 7 September 1991.

sign. rating: 45
evaluation: NRHP non-eligible (typically configured example of MSHD standard truss design)

inventoried by: Clayton B. Fraser 14 July 1993

Big River Bridge

SAFR09

GENERAL DATA

structure no.: 270006.1 city/town: 2.8 miles north of Bonne Terre
county: St. Francois feature inters.: Big River
cadastral grid: S2, T37N, R4E
highway route: County Road 270
highway distr.: 10
current owner: St. Francois County

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss, with 8 concrete deck girder approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1 condition: good
span length: 120.0' alterations: none
total length: 462.0' floor/decking : concrete deck over steel stringers
roadway width: 20.1' other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1924
erection cost: \$46,793.00
designer: Missouri State Highway Department
fabricator : unknown
contractor: Public Works Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 270006.1; Primary System Bridge files, St. Francois County, located at Missouri Highway and Transportation Department, Jefferson City MO; Missouri State Highway Commission, **Third Biennial Report**: 1921-22, page 144; Missouri State Highway Commission, **Fourth Biennial Report**: 1923-24, page 175; field inspection by Clayton Fraser, 7 September 1991.

sign. rating: 41
evaluation: NRHP non-eligible (typically configured example of MSHD standard truss design)

inventoried by: Clayton B. Fraser 14 July 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Terre Bleue Bridge
MHTD: 053000.2

SAFR03

DATE(S) OF CONSTRUCTION

1935

LOCATION

County Road 53 over Terre Bleue Creek; S10/15, T37N, R5E
4.7 miles east of Bonne Terre; St. Francois County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION

good

OWNER

St. Francois County

span number: 7; 2
span length: 30.0'
total length: 203.0'
roadway wdt.: 20.0'

superstructure: stone arch; concrete slab approach spans at one end
substructure: stone
floor/decking: unknown
other features: unknown

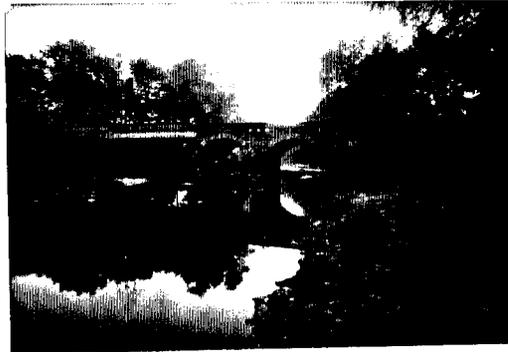
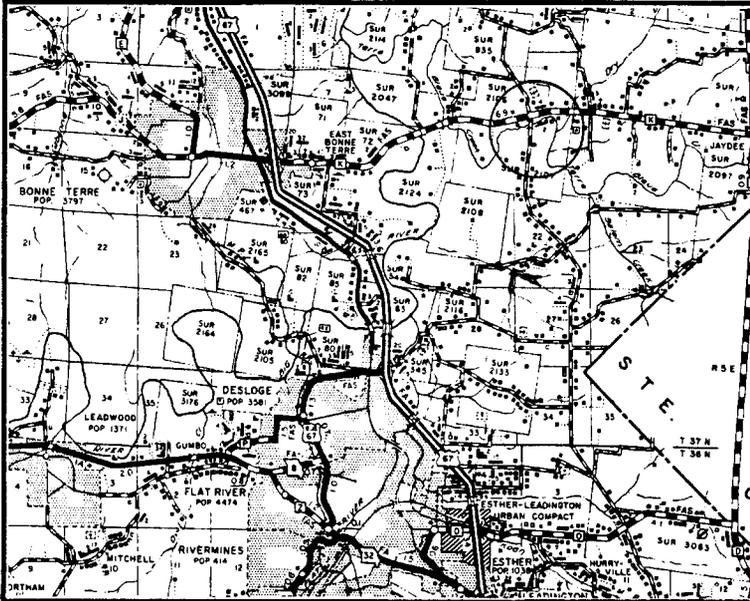
This structure carries gravel-surfaced County Road 53 over the Terre Bleue Creek slightly less than five miles east of Bonne Terre. This aesthetically striking structure is comprised of seven 30-foot stone masonry arches, divided into groups of three and four that are separated by two steel stringer spans. Improbably, all of the spans appear to be original and unaltered. According to records in the county engineer's office, the bridge was built in 1935, but this date was not confirmed through primary sources. Owing to the structure's appearance and given date of construction, it is likely that labor to construct the bridge was supplied by the Civilian Conservation Corps (CCC). Exhibiting stone masonry craftsmanship typical of CCC construction, the bridge is one of only sixteen stone bridges in the state, as identified by the statewide historic bridge inventory. The Terre Bleue Bridge continues to function in place today in northern St. Francois County, with few structural alterations.

Stone is a common, indigenous building material, used often in Missouri for substructures under steel, even concrete, bridges. This use has not been limited to the 19th century, as is found in some states. Stone substructures can be found under bridges erected as late as the 1930s in Missouri. However, true stone arches, once a common early bridge type, are now relatively rare in the state, due largely to subsequent attrition. Less than twenty stone arch bridges have been identified in Missouri by the statewide historic bridge inventory. Because these structures tended to be small-scale and vernacular in design, built by local stonemasons, their documentation in county records has been difficult to locate. The Terre Bleue Bridge is no exception to this trend. The longest stone structure in Missouri, this handsome structure is one of the most distinguished of the stone arches found in the state.

NAME(S) OF STRUCTURE

Terre Bleue Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 053000.2; field inspection by Clayton Fraser, 7 September 1991.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

7 September 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Big River Bridge
MHTD: 269002.6

SAFR08

DATE(S) OF CONSTRUCTION

1924

LOCATION

County Road 269 over Big River; S29, T37N, R5E
1.5 miles northwest of Desloge; St. Francois County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / roadway bridge

RATING NRHP non-eligible (score: 45)

CONDITION

good

OWNER

St. Francois County

span number: 1
span length: 150.0'
total length: 366.0'
roadway wdt.: 20.2'

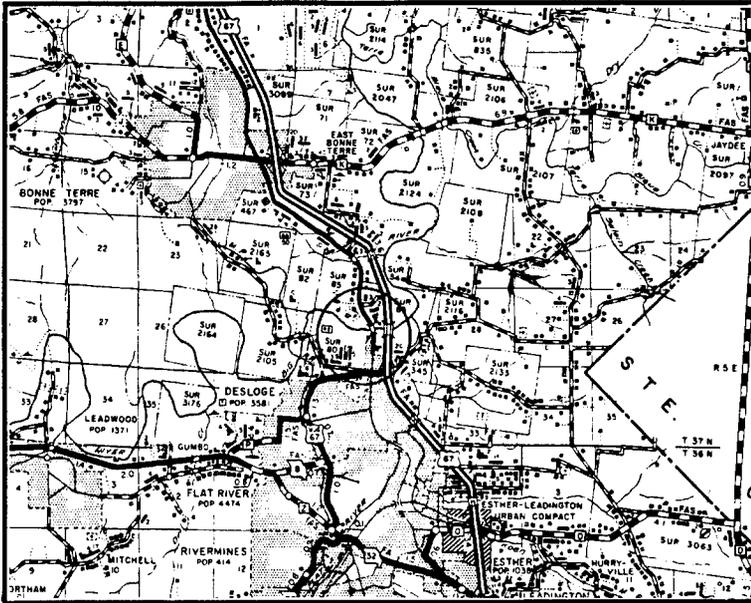
superstructure: steel, 8-panel, rigid-connected Parker through truss; 8 concrete deck girder approach spans at the north end
floor/decking: concrete deck and curbing over steel stringers
substructure: concrete abutments, wingwalls and piers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; strut: 2 braced angles; floor beam: I-beam, field-bolted to vertical; guardrail: 2 steel pipes; bridge plate: **MISSOURI HIGHWAY DEPT. / BRIDGE No. G 848 / 1924**

This 366-foot-long highway structure carries County Road 269 over the Big River northwest of Desloge. The bridge is configured as a rigid-connected Parker through truss over the river's main channel, with a series of eight 40-foot concrete deck girders on the truss's north end. The superstructure is supported by concrete piers and abutments. The Big River Bridge traces its origins to 1924. That spring the Missouri State Highway Department designed this multiple-span structure as part of general construction on State Highway 9. A contract to build this bridge, another over span over a channel of the Big River [SAFR09] and the highway inbetween was awarded on June 24th to the Public Works Construction Company. Public Works used steel components rolled by Inland to complete the bridge later that year. Overall cost for the Big River Bridge: \$36,961.45. State Highway 9 later became part of U.S. Highway 67, and eventually this section was turned over to the county when the highway was re-built as a limited access route. Since that time the Big River Bridge has carried primarily local traffic, with essentially no alterations. Continuing to carry traffic in central St. Francois County, the bridge exhibits strong structural integrity. It is a typically detailed example of Missouri Highway Department through truss design, distinguished somewhat by its overall length.

NAME(S) OF STRUCTURE

Big River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP



SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 269002.6; Primary System Bridge files, St. Francois County, located at Missouri Highway and Transportation Department, Jefferson City MO; Missouri State Highway Commission, **Third Biennial Report: 1921-22**, page 144; Missouri State Highway Commission, **Fourth Biennial Report: 1923-24**, page 175; field inspection by Clayton Fraser, 7 September 1991.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

7 September 1991

STODDARD COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
*STOD01	P 56	Bridge	1-120' riveted Pratt through truss 1951 Chappel Construction Company
*STOD02	052000.0	Proffer Road Bridge	1-125' pinned Pratt through truss 1906 Vincennes Bridge Company
*STOD03	056000.8	Well's Ford Bridge	1-100' pinned Pratt through truss 1913 Vincennes Bridge Company
*STOD04	137001.0	Bridge	1- 50' pinned Pratt pony truss 1914 Township Supply Company; county work force
*STOD05	452001.1	Bridge	1-114' riveted Warren pony truss c1925 SL&SFRR bridge crew (prob.)
*STOD06	452004.0	St. Francis River Bridge	1-180' pinned Pratt through truss c1925 SL&SFRR bridge crew (prob.)
*STOD07	521000.0	Capps Road Bridge	1-120' pinned Pratt through truss c1910 Vincennes Bridge Company
*STOD08	553001.1	Bridge	1- 80' riveted Pratt deck truss c1950

EXCLUDED:

Warren pony truss
 F 973R1 F1135R T 137 583000.9 596000.0

Steel stringer

DUCK001	F 564R	F 565R	F104OR	F1128R	G 502R	G 892R
G 894R	H 327	H 328	H 332	J 740	K 40	K 801
K 802	K 803	K 895	K 896	MINGO08	S 168	S 232
S 613	S 688	S 742	S 769	S 770	S 771	S 846
T 136	T 392	T 393	T 435	T 941	T 942	T 943
T 987	X 730	X 731	X 829	X 830	X 831	X 832
X 833	X 837	X 838	X 839	019000.9	083000.3	419001.6
521000.4	581000.6	581002.2	582001.3	583001.2	583001.4	583001.6
583001.7	584000.1	584000.4	588000.0	594000.5		

Steel girder

187000.9 486001.0 507000.2

Concrete girder

F1028R H 142 K 31 K 32 K 54R 031000.6 031001.7

STODDARD COUNTY

EXCLUDED (cont.):

Timber stringer

MINGO01 MINGO02 MINGO06 T1027 452R03.3 452R03.9 452001.9
508000.3

Concrete slab

L 19 L 20 L 21 L 22 L 39 019002.7 031000.4

Concrete box culvert

G 288R G 292R H 342 H 343 H 677 J 397 K 30R
K 87R K 934 MINGO09 S 448 S 449 S 450 S 451
S 663 T 350 U1155004 X 729

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	7	0	0	8
Excluded	77	28	4	0	109
	<hr/>				
	78	35	4	0	117 structures

Bridge

STOD01

GENERAL DATA

structure no.:	P 56	city/town:	1.4 miles southwest of Himmel
county:	Stoddard	feature inters.:	Drainage Ditch No. 1
		cadastral grid:	S14, T27N, R12E
		highway route:	State Supplementary Route DD
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 6-panel, rigid-connected Pratt through truss		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	120.0'	alterations:	none
total length:	124.0'	floor/decking :	concrete deck over steel stringers
roadway width:	17.0'	other features:	steel angle guardrails

HISTORICAL DATA

erection date:	1950-51
erection cost:	\$17,182.75
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Chappel Construction Company / Paul Montgomery
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. P 56; Missouri Highway and Transportation Department, Primary System Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO.
sign. rating:	37
evaluation:	NRHP non-eligible (typically configured, late example of common structural type)

inventoried by: Michelle Crow-Dolby 16 May 1993

Proffer Road Bridge

STOD02

GENERAL DATA

structure no.: 052000.0	city/town: 2.0 miles southeast of Avert
county: Stoddard	feature inters.: Castor River (old channel)
	cadastral grid: S28, T27N, R11E
	highway route: county road
	highway distr.: 10
	current owner: Stoddard County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments

span number: 1	condition: poor (bridge closed)
span length: 125.0'	alterations: deck removed; bridge closed
total length: 125.0'	floor/decking : deck removed
roadway width: 13.6'	other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 looped round eyerods at the hip); diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles with 2 angle knee braces; portal strut: lattice with angle knee braces; floor beam: riveted plate girder, field bolted to vertical; stringers: I-beam; guardrail: 2 channels; portal builder's plates removed

HISTORICAL DATA

erection date: 1905-06
erection cost: \$1775.00
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 052000.0; Stoddard County Court Record J: page 475 (3 June 1901); Stoddard County Court Record K: page 387 (4 August 1903); Stoddard County Court Record L: page 19 (5 May 1904), page 388 (6 June 1905), page 428 (9 August 1905); Stoddard County Court Record M: page 105 (12 March 1906), page 226 (10 May 1906), located at Stoddard County Courthouse, Bloomfield MO; oral interview with Norman Moore, Stoddard County Presiding Commissioner, 31 March 1992; field inspection by Richard Collier, 30 March 1992.

Proffer Road Bridge

sign. rating: 40

evaluation: NRHP non-eligible (typically configured example of mainstay structural type)

inventoried by: Michelle Crow-Dolby 16 May 1993

Well's Ford Bridge

STOD03

GENERAL DATA

structure no.:	056000.8	city/town:	1.2 miles east of Avert
county:	Stoddard	feature inters.:	Castor River (old channel)
		cadastral grid:	S2, T26N, R11E
		highway route:	County Road 56
		highway distr.:	10
		current owner:	Stoddard County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number:	1	condition:	poor (bridge closed)
span length:	100.0'	alterations:	deck and stringers removed; bridge closed
total length:	101.0'	floor/decking :	deck removed
roadway width:	13.4'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 looped round eyerods at the hip); diagonal: 2 punched rectangular eyebars; counter: looped round eyerod; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: lattice with 2-angle knee braces; floor beam: I-beam, field bolted to vertical; channel guard-rails

HISTORICAL DATA

erection date: 1913
erection cost: \$1850.00
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 056000.8; Stoddard County Court Record J: page 118 (29 December 1899); Stoddard County Court Record K: page 17 (5 May 1902), page 107 (18 September 1902), page 252 (2 March 1903); Stoddard County Court Record P: page 104 (6 December 1909), page 165 (10 February 1910), page 313 (9 August 1910), page 414 (7 September 1910); Stoddard County Court Record R: page 170 (8 April 1912), page 544 (17 February 1913), page 549 (3 March 1913), page 550 (17 March 1913), page 624 (3 April 1913); Stoddard County Court Record S: page 7 (5 May 1913), located at Stoddard County Courthouse, Bloomfield MO; oral interview with Norman Moore, Stoddard County Presiding Commissioner, 31 March 1992; field inspection by Richard Collier and Carl McWilliams, 30 March 1992.

Well's Ford Bridge

sign. rating: 35
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Michelle Crow-Dolby 16 May 1993

Bridge

STOD04

GENERAL DATA

structure no.:	137001.0	city/town:	2.9 miles northeast of Dexter
county:	Stoddard	feature inters.:	drainage ditch
		cadastral grid:	S12, T25N, R10E
		highway route:	County Road 137
		highway dist.:	10
		current owner:	Stoddard County

STRUCTURAL DATA

superstructure:	steel, 4-panel, pin-connected Pratt pony truss		
substructure:	steel pile bent abutments with timber back- and wingwalls		
span number:	1	condition:	fair
span length:	50.0'	alterations:	none
total length:	51.0'	floor/decking :	timber deck over steel stringers
roadway width:	13.8'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round rod with turn-buckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date:	1914
erection cost:	\$400.00 (superstructure cost)
designer:	Township Supply Company, St. Louis MO (probable)
fabricator :	Township Supply Company, St. Louis MO (probable)
contractor:	county work force
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 137001.0; Stoddard County Court Record S: page 347 (12 February 1914), page 362 (16 February 1914), located at Stoddard County Courthouse, Bloomfield MO; field inspection by Richard Collier, 30 March 1992.
sign. rating:	27
evaluation:	NRHP non-eligible (typical example of common structural type)

inventoried by: Michelle Crow-Dolby 16 May 1993

Bridge

STOD05

GENERAL DATA

structure no.: 452001.1	city/town: 2.1 miles southwest of Mingo
county: Stoddard	feature inters.: Mingo Spillway Ditch
	cadastral grid: S17/18, T26N, R8E
	highway route: County Road 452
	highway distr.: 10
	current owner: Stoddard County

STRUCTURAL DATA

superstructure: steel, 9-panel, rigid-connected Warren pony truss
substructure: timber pile bent abutments

span number: 1	condition: fair
span length: 114.0'	alterations: converted from railroad to roadway use
total length: 114.0'	floor/decking : concrete deck over plate girder stringers
roadway width: 14.1'	other features: upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 2 continuous plates with 2 angles and batten plates; vertical: 2 angles with 2-angle outriders (lacing between vertical and outrider); diagonal: 4 angles with continuous plate; lateral bracing: 1 angle; floor beam: plate girder

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : Phoenix Iron Company, Philadelphia PA
contractor: St. Louis & San Francisco Railroad bridge crew (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 452001.1; field inspection by Richard Collier, 30 March 1992.

sign. rating: 22
evaluation: NRHP non-eligible (railroad bridge in original location, converted to use as a county road)

inventoried by: Michelle Crow-Dolby 16 May 1993

St. Francis River Bridge

STOD06

GENERAL DATA

structure no.: 452004.0	city/town: 3.8 miles southwest of Asherville
county: Stoddard	feature inters.: St. Francis River
	cadastral grid: S25, T26N, R7E
	highway route: County Road 452
	highway distr.: 10
	current owner: Stoddard County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with timber stringer approach spans
substructure: stone masonry piers under main span; timber pile bent piers under approach spans

span number: 1	condition: fair
span length: 180.0'	alterations: converted from railroad to roadway use
total length: 293.0'	floor/decking : concrete deck over plate girder stringers
roadway width: 12.8'	other features: upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 face-to-face channels with lacing (4 angles with continuous plate at the hip); diagonal: 2 punched rectangular eyebars; counter: flat rod with turnbuckle; lateral bracing: 1 angle; strut: 4 angles with lacing, and 2 angle knee braces; portal strut: A-frame; floor beam: plate girders

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : Phoenix Iron Company, Philadelphia PA
contractor: St. Louis - San Francisco Railroad bridge crew (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 452004.0; field inspection by Richard Collier, 30 March 1992.

sign. rating: 29
evaluation: NRHP non-eligible (railroad bridge in original location, converted to use as a county road)

inventoried by: Michelle Crow-Dolby 16 May 1993

Capps Road Bridge

STOD07

GENERAL DATA

structure no.: 521000.0 city/town: 1.4 miles northwest of Aquilla
county: Stoddard feature inters.: old channel of Castor River
cadastral grid: S26, T27N, R10E
highway route: County Road 521
highway distr.: 10
current owner: Stoddard County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments; concrete-filled steel cylinder piers

span number: 1 condition: fair
span length: 120.0' alterations: none
total length: 145.0' floor/decking : timber deck over steel stringers
roadway width: 13.5' other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with 2-angle knee braces; portal strut: lattice with 2-angle knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN;
Cambria Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 521000.0; Stoddard County Court Record L: page 24 (6 June 1904), page 38 (1 August 1904), page 247 (6 February 1905), located at Stoddard County Courthouse, Bloomfield MO; oral interview with Norman Moore, Stoddard County Presiding Commissioner, 31 March 1992; field inspection by Richard Collier, 30 March 1992.
sign. rating: 38
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Michelle Crow-Dolby 16 May 1993

Bridge

STOD08

GENERAL DATA

structure no.:	553001.1	city/town:	4.4 miles southwest of Dudley
county:	Stoddard	feature inters.:	drainage ditch
		cadastral grid:	1/12, T24N, R8E
		highway route:	County Road 553
		highway distr.:	10
		current owner:	Stoddard County

STRUCTURAL DATA

superstructure:	steel, 15-panel, rigid-connected Pratt deck truss, with steel stringer approach spans		
substructure:	steel pile bent piers and abutments		
span number:	1	condition:	fair
span length:	80.0'	alterations:	none
total length:	80.0'	floor/decking :	timber deck over transverse steel stringers
roadway width:	16.0'	other features:	upper chord: I-beam; inclined end post: wide flange; lower chord: wide flange; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle

HISTORICAL DATA

erection date:	c1950
erection cost:	unknown
designer:	unknown
fabricator :	unknown
contractor:	unknown
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 553001.1; field inspection by Richard Collier, 30 March 1992.
sign. rating:	43
evaluation:	NRHP non-eligible (particularly unattractive, late example of uncommon structural type)

inventoried by: Michelle Crow-Dolby 16 May 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Proffer Road Bridge (Castor River Bridge)

MHTD: 052000.0

LOCATION

county road over Castor River (old channel); S28, T27N, R11E
2.0 miles southeast of Avert; Stoddard County, Missouri

STOD02

DATE(S) OF CONSTRUCTION

1905-06

USE (ORIGINAL / CURRENT)

roadway bridge / abandoned

RATING NRHP non-eligible (score: 40)

CONDITION

poor (bridge closed)

OWNER

Stoddard County

span number: 1
span length: 125.0'
total length: 125.0'
roadway wdt.: 13.6'

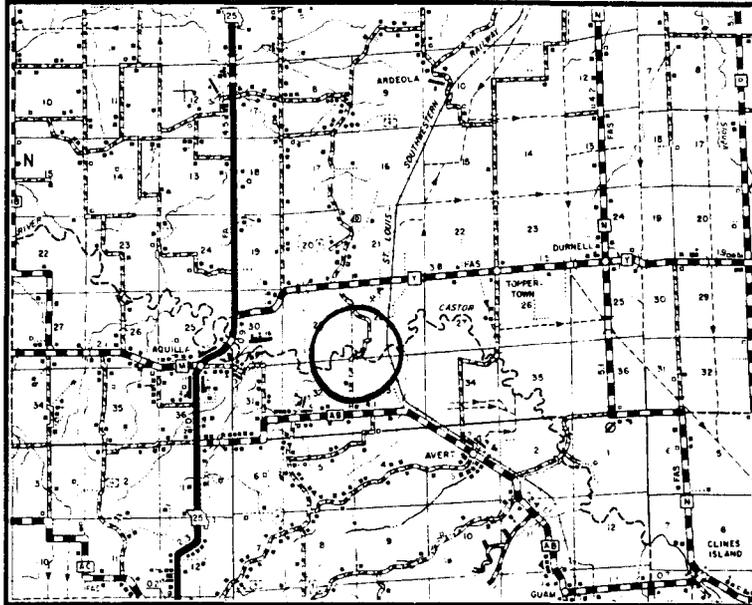
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments
floor/decking: deck removed
other features: upper chord / inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 looped round rods at the hip); diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles with 2 angle knee braces; portal strut: lattice with angle knee braces; floor beam: riveted plate girder, field bolted to vertical; stringers: I-beam; guardrail: 2 channels; portal builder's plates removed

From its initial planning in June 1901 to its completion in March 1906, the Proffer Road Bridge was five years and three county surveyors in the making. On June 3, 1901, Stoddard County Surveyor William Huffman submitted a report regarding bridging the Castor River near the John Cooper Farm, on the W.H. Proffer Road. Huffman stated that a 150-foot wooden structure was needed, to cost approximately \$340.00. Although the county court accepted his report, it decided not to undertake construction at that time. The project then lay dormant for over two years, until early August 1903. By then A.C. Spiker had become the county surveyor, and, like Huffman before him, Spiker was directed to survey and estimate the cost of a Castor River Bridge on the Proffer Road. Also like Huffman, Spiker prepared plans and estimates for a wood bridge. In May 1904 the county court ordered bids let for its construction. There is no evidence, though, that a wood bridge was actually built. Instead, the county began to consider a costlier, but more permanent, iron or steel truss. In early 1905 county surveyor Rudolph Weber (Spiker's successor) continued the tradition of surveying and estimating the cost of a bridge on the Proffer Road. Unlike Huffman and Spiker, however, Weber's plans came to fruition. In June 1905 he estimated a wood bridge's cost at \$900.00, and a steel bridge at \$2100.00. In August the Vincennes Bridge Company of Vincennes IN was awarded a \$1775.00 contract to fabricate and build a steel truss for this crossing. Completed in March 1906, the bridge functioned as built until its recent abandonment.

Marketed extensively by virtually all of the in-state and regional bridge contractors and promoted in the form of standardized designs, the pinned Pratt through truss was widely used by Missouri's counties to carry roads over the state's myriad watercourses. Thousands of such trusses were erected across the state in the late 19th and early 20th centuries, and many remain in place today. Stoddard County's oldest intact wagon span, the Proffer Road Bridge typifies this widespread bridge building trend.

NAME(S) OF STRUCTURE

Proffer Road Bridge (Castor River Bridge)

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 052000.0; Stoddard County Court Record J: page 475 (3 June 1901); Stoddard County Court Record K: page 387 (4 August 1903); Stoddard County Court Record L: page 19 (5 May 1904), page 388 (6 June 1905), page 428 (9 August 1905); Stoddard County Court Record M: page 105 (12 March 1906), page 226 (10 May 1906), located at Stoddard County Courthouse, Bloomfield MO; oral interview with Norman Moore, Stoddard County Presiding Commissioner, conducted by Carl McWilliams, 31 March 1992; field inspection by Carl McWilliams and Richard Collier, 30 March 1992.

INVENTORIED BY

Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

6 May 1992

WAYNE COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
*WAYN01	J 21R	St. Francis River Bridge	1-170' riveted Warren through truss 1941 George W. Condon
*WAYN02	J 935	Leeper Bridge	2-180' rivet Parker/Pratt through truss 1933 List & Clark Construction Co.
*WAYN03	031002.2	Montgomery Ford Bridge	1-100' pinned Pratt through truss 1913 Vincennes Bridge Co. (prob.)
*WAYN04	069000.5	Wappapello Bridge	1-210' pin Pennsylvania through truss 1911 Stupp Bros. Bridge & Iron Co.
*WAYN05	090001.1	Duncan Ford Bridge	1-190' pin Pennsylvania through truss 1913 Vincennes Bridge Company
*WAYN06	200000.6	Clark Creek Bridge	2- 90' riveted Warren pony truss 1924

EXCLUDED:

Pratt pony truss
123000.0

Warren pony truss
H 899

Steel stringer

F 111R	G 446R	MING002	S 496	S 498	S 906	T 712
T 1033	020002.6	023001.2	027R00.1	027001.2	030001.0	032000.3
043000.8	043002.6	063001.5	064000.2	131001.8	150003.5	176001.0
187000.7	187000.9	189000.3	204000.3	206000.1	213000.3	3415R0.3
341500.1						

Concrete girder

G 881	H 80R	H 81R	H 348	H 349 R	K 115	K 357
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Concrete box culvert

DUCK001	DUCK002	F 1122	G 875	G 876	G 877	G 901R
H 268	H 350R	H 351R	H 443	H 937	K 157	K 356
P 114	S 104	S 495	S 497	S 543	S 821	T 415
X 526	X 605	X 606	X 775R	X 919	X 920	Y 351
Y 352	Y 353	Y 354	Y 435	Y 436	013001.7	015000.2
020004.5	027002.6	055R00.2	061001.2	073000.1	092R00.1	096001.2
105000.0	167003.2	168000.6	169000.2	186001.9	187R00.1	202000.2
209000.3	216001.0					

WAYNE COUNTY

EXCLUDED (cont.):

Concrete slab

G 445R	H 113R	H 114R	J 630	MING001	W 59	043001.9
061000.2	090003.2	092002.2	096000.9	123001.4	123003.2	128000.1

Timber stringer

MINGO03	MINGO04	MINGO05	T1029	T1030	049001.4
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SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	2	4	0	0	6
Excluded	60	49	0	0	109
	<hr/>				
	62	53	0	0	115 structures

St. Francis River Bridge

WAYN01

GENERAL DATA

structure no.:	J 21R	city/town:	6.6 miles south of Greenville
county:	Wayne	feature inters.:	St. Francis River
		cadastral grid:	S13, T28N, R5E
		highway route:	U.S. Highway 67
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 8-panel, rigid-connected Warren through truss with polygonal top chord, skewed, with steel stringer approach spans		
substructure:	concrete abutments, wingwalls and piers; hammerhead spill-through piers at approach spans		
span number:	1	condition:	good
span length:	170.0'	alterations:	none
total length:	851.0'	floor/decking :	asphalt on concrete deck, over steel stringers
roadway width:	26.0'	other features:	upper chord / inclined end post: 2 face-to-face channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle; strut: 4 angles with lacing and bracing; portal strut: 4 angles with lacing; floor beam: I-beam; guardrail: 2 channels

HISTORICAL DATA

erection date:	1941
erection cost:	\$158,598.07
designer:	Missouri State Highway Department
fabricator :	unknown
contractor :	George W. Condon Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. J 21R; Missouri Highway and Transportation Department, Primary System Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; field inspection by Richard Collier, 31 March 1992.
sign. rating:	62
evaluation:	NRHP possibly eligible (well-preserved example of rare through truss design by MSHD)

inventoried by: Michelle Crow-Dolby 21 May 1993

Leeper Bridge

WAYN02

GENERAL DATA

structure no.:	J 935	city/town:	0.3 mile northwest of Leeper
county:	Wayne	feature inters.:	Black River
		cadastral grid:	S22/27, T28N, R3E
		highway route:	Missouri State Highway 34
		highway distr.:	10
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: two steel, 9-panel, rigid-connected Parker through trusses; two steel, 6-panel rigid-connected Pratt through trusses; steel stringer approach spans

substructure: concrete abutments, wingwalls and piers; steel pile bent piers under approach spans

span number:	2; 2	condition:	good
span length:	180.0'; 120.0'	alterations:	none
total length:	988.0'	floor/decking :	concrete deck over steel stringers
roadway width:	22.0'	other features:	upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; strut: 4 angles with X-bracing; portal strut: wide flange; floor beam: I-beam; guardrail: 2 channels; end post-mounted bridge plate: Missouri Highway Dept Bridge N ^o J 935 1933

HISTORICAL DATA

erection date: 1933
erection cost: \$73,397.92
designer: Missouri State Highway Department
fabricator : Inland Steel Company, East Chicago IN
contractor: List and Clark Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. J 935; Missouri Highway and Transportation Department, Primary System Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; Wayne County Court Record 8: page 185 (20 December 1911), page 224 (27 February 1912), page 279 (24 May 1912), page 292 (31 May 1912), page 600 (22 May 1913), located at the Wayne County Courthouse, Greenville MO; Missouri State Highway Commission, **Ninth Biennial Report: 1933-34**, pages 185-87; field inspection by Richard Collier, 31 March 1992.

Leeper Bridge

sign. rating: 52

evaluation: NRHP possibly eligible (well-preserved, multiple-span example of MSHD truss design)

inventoried by: Michelle Crow-Dolby 21 May 1993

Montgomery Ford Bridge

WAYN03

GENERAL DATA

structure no.:	031002.2	city/town:	1.0 mile west of Lowndes
county:	Wayne	feature inters.:	Bear Creek
		cadastral grid:	S28, T29N, R7E
		highway route:	County Road 31
		highway distr.:	10
		current owner:	Wayne County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete-filled steel cylinder piers, with timber back- and wingwalls

span number:	1	condition:	fair
span length:	100.0'	alterations:	none
total length:	100.0'	floor/decking :	timber deck over steel stringers
roadway width:	12.0'	other features:	upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with 1-angle knee braces; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1913
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN (probable)
fabricator : Vincennes Bridge Company, Vincennes IN (probable)
contractor: Vincennes Bridge Company, Vincennes IN (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 031002.2; Wayne County Court Record 8: page 575 (19 May 1913) - located at the Wayne County Courthouse, Greenville, Missouri; field inspection by Richard Collier, 31 March 1992.

sign. rating: 31
evaluation: NRHP non-eligible (typically configured example of common bridge type)

inventoried by: Michelle Crow-Dolby 21 May 1993

Wappapello Bridge

WAYN04

GENERAL DATA

structure no.: 069000.5	city/town: 0.5 mile south of Wappapello
county: Wayne	feature inters.: St. Francis River
	cadastral grid: S2, T26N, R7E
	highway route: County Road 69
	highway distr.: 10
	current owner: Wayne County

STRUCTURAL DATA

superstructure: steel, 10-panel, pin-connected Pennsylvania through truss, with steel stringer approach spans	
substructure: concrete abutments (below grade); concrete-filled steel cylinder piers under main span; timber pile bent piers under approach spans	
span number: 1	condition: fair (bridge closed)
span length: 210.0'	alterations: none
total length: 280.0'	floor/decking : timber deck over steel stringers
roadway width: 13.3'	other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with 2-angle bracing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; portal builder's plate: 1911 Built By Stupp Bro's Bridge & Iron Company St. Louis M ^o ; bridge plate (south end): Class B

HISTORICAL DATA

erection date: 1911	
erection cost: \$4000.00 (engineer's estimate)	
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO	
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Lackawanna Steel Company, Pittsburgh PA	
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 069000.5; Wayne County Court Record, Book 7, page 553 (25 August 1910); Book 8, page 124 (29 August 1911), page 160 (21 November 1911), located at the Wayne County Courthouse, Greenville MO; W.A.L. Waddell, Bridge Engineering (London: John Wiley and Sons, 1916); field inspection by Richard Collier, 31 March 1992.	

Wappapello Bridge

sign. rating: 67

evaluation: NRHP possibly eligible (well-preserved, long-span example of uncommon structural type)

inventoried by: Michelle Crow-Dolby 21 May 1993

Duncan Ford Bridge

WAYN05

GENERAL DATA

structure no.: 090001.1	city/town: 1.0 mile south of Williamsville
county: Wayne	feature inters.: Black River
	cadastral grid: S29, T27N, R5E
	highway route: County Road 90
	highway distr.: 10
	current owner: Wayne County

STRUCTURAL DATA

superstructure: steel, 10-panel, pin-connected Pennsylvania through truss, with steel stringer approach spans	
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers under main span; concrete piers under approach spans	
span number: 1	condition: fair
span length: 190.0'	alterations: none
total length: 229.0'	floor/decking : timber deck over steel stringers
roadway width: 15.7'	other features: upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 4 angles with X-bracing between; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1912-13
erection cost: \$4193.00
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN; Carnegie Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 090001.1; Wayne County Court Record, Book 8, page 185 (20 December 1911), page 224 (27 February 1912), page 279 (24 May 1912), page 292 (31 May 1912), page 600 (22 May 1913), page 600 (22 May 1913), located at the Wayne County Courthouse, Greenville MO; "County Makes Plans To Replace 1909 Bridge Near Williamsville", Wayne County Journal-Banner , Piedmont, Missouri (1 November 1984); field inspection by Richard Collier, 31 March 1992.

Duncan Ford Bridge

sign. rating: 63
evaluation: NRHP possibly eligible (well-preserved, long-span example of uncommon structural type)

inventoried by: Michelle Crow-Dolby 21 May 1993

Clark Creek Bridge

WAYN06

GENERAL DATA

structure no.:	200000.6	city/town:	0.2 mile west of Patterson
county:	Wayne	feature inters.:	Clark Creek
		cadastral grid:	S18, T29N, R5E
		highway route:	County Road 200
		highway distr.:	10
		current owner:	Wayne County

STRUCTURAL DATA

superstructure: steel, 9-panel, rigid-connected Warren pony truss, with 5-panel, rigid-connected Warren pony approach span

substructure: concrete abutments, wingwalls and pier

span number:	2	condition:	good
span length:	90.0'	alterations:	none
total length:	141.0'	floor/decking :	asphalt on concrete deck, over transverse steel stringers
roadway width:	18.0'	other features:	upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; floor beam: none; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1923-24

erection cost: \$13,745.00 (engineer's estimate)

designer: Missouri State Highway Department

fabricator : Lackawanna Steel Company, Pittsburgh PA

contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 200000.6; Missouri State Highway Commission, **Third Biennial Report:** 1921-22, page 144; Missouri State Highway Commission, **Fourth Biennial Report:** 1923-24, page 175; field inspection by Richard Collier, 31 March 1992.

sign. rating: 39

evaluation: NRHP non-eligible (typical example of common highway truss type, distinguished marginally by its two-span configuration)

inventoried by: Michelle Crow-Dolby 21 May 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

St. Francis River Bridge
MHTD: J 21R

WAYN01

DATE(S) OF CONSTRUCTION

1941

LOCATION

U.S. Highway 67 over St. Francis River; S13, T28N, R5E
6.6 miles south of Greenville; Wayne County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING potentially NRHP eligible (score: 62)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 1
span length: 170.0'
total length: 851.0'
roadway wdt.: 26.0'

superstructure: steel, 8-panel, rigid-connected Warren through truss with polygonal top chord, skewed, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers; hammerhead spill-through piers at approach spans
floor/decking: asphalt on concrete deck, over steel stringers
other features: upper chord / inclined end post: 2 face-to-face channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle; strut: 4 angles with lacing and bracing; portal strut: 4 angles with lacing; floor beam: I-beam; guardrail: 2 channels

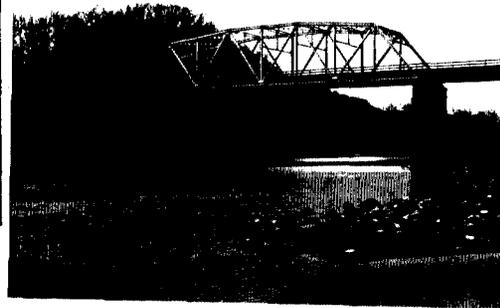
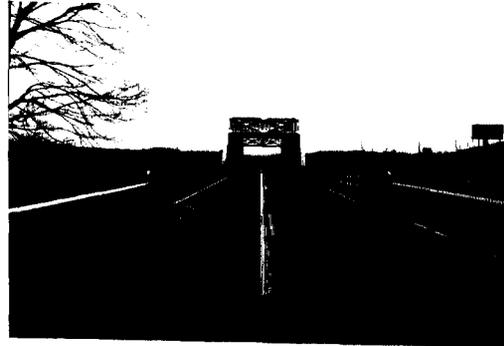
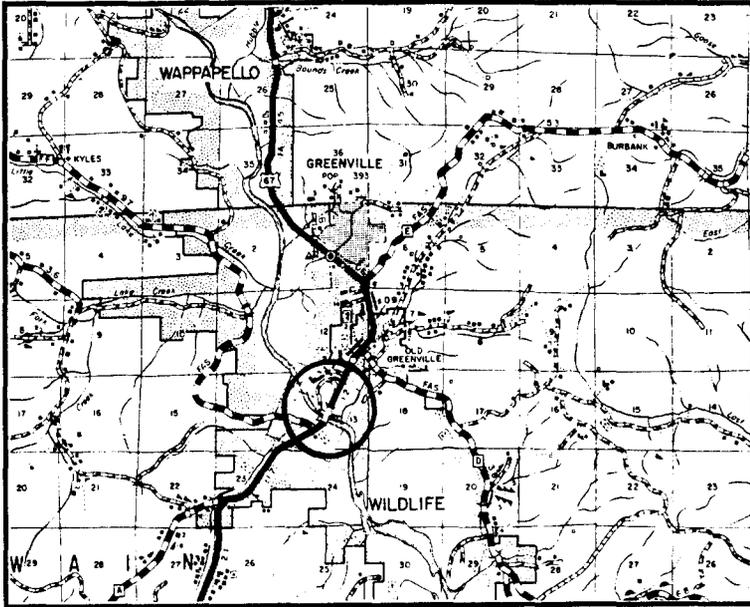
This crossing of the St. Francis River is located on U.S. Highway 67, 6½ miles south of Greenville, at the river's inlet into Wappapello Lake. A riveted Warren through truss with polygonal top chords, the structure is skewed and rests on a concrete substructure. There are nine steel stringer approach spans on the north end, and two more on the south end. Design work for the crossing was prepared by the Missouri State Highway Department in the fall of 1940. On November 29th, the George W. Condon Company received a \$158,598.07 contract for the bridge's erection. Completed early in 1941, the structure has since carried moderate to heavy traffic loads on this principal north-south artery. The Condon-built bridge replaced an earlier structure, erected just over ten years previously, in the summer of 1930. Comprised of an 80-foot truss, and multiple plate girder approach spans, the 1930 bridge at the site was built by S.J. Cohen for \$86,712.10. The St. Francis River Bridge typifies long-span truss design and detailing by the state highway department.

Throughout the 1920s and 1930s the Missouri State Highway Department relied almost exclusively on rigid-connected Pratt and Parker configurations for its medium-span through trusses. The agency adopted Warren configurations for its pony trusses and for its cantilevered through trusses over the Missouri and Mississippi rivers, but for some reason did not employ Warren webs for its simply supported through trusses. The St. Francis River Bridge marks a departure from this trend, and a reconciliation of sorts between pony and through truss design by the highway department. World War II arrested most steel bridge construction in the early 1940s, and as trusses were used less frequently for all but the longest-span crossings after the war, the Warren through truss never received widespread use in the state. Although the St. Francis River Bridge itself is technologically unadventurous, it represents a prototype in MSHD bridge design.

NAME(S) OF STRUCTURE

St. Francis River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. J 21R; Missouri Highway and Transportation Department, Primary System Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; field inspection by Carl McWilliams and Richard Collier, 31 March 1992.

INVENTORIED BY

Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

11 May 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Leeper Bridge (Black River Bridge)
MHTD: J 935

WAYN02

DATE(S) OF CONSTRUCTION

1933

LOCATION

Missouri State Highway 34 over Black River; S22/27, T28N, R3E
0.3 mile northwest of Leeper; Wayne County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP potentially eligible (score: 52)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 2; 2
span length: 180.0'; 120.0'
total length: 988.0'
roadway wdt.: 22.0'

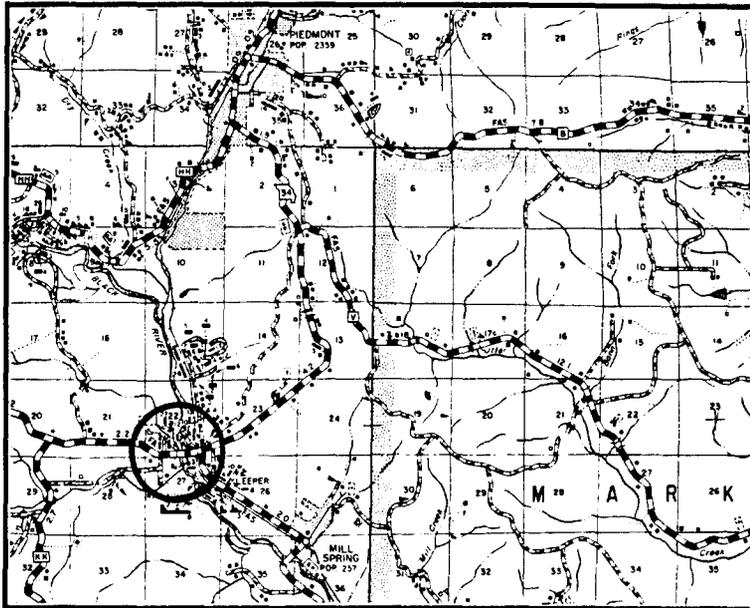
superstructure: two steel, 9-panel, rigid-connected Parker through trusses; two steel, 6-panel rigid-span connected Pratt through trusses; steel stringer approach spans
substructure: concrete abutments, wingwalls and piers; steel pile bent piers under approach spans
floor/decking: concrete deck over steel stringers
other features: upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; strut: 4 angles with X-bracing; portal strut: wide flange; floor beam: I-beam; guardrail: 2 channels; end post-mounted bridge plate:
Missouri Highway Dept Bridge No J 935 1933

This crossing of the Black River is located on Missouri Highway 34, just northwest of the small town of Leeper. The two Parker truss channel spans are flanked by two Pratt through trusses, with eight steel stringer approach spans on the north end. Support for the superstructure is provided by concrete abutments and piers, with steel pile bent piers under the steel stringer spans. Design work was prepared by the Missouri State Highway Department in early 1933. On March 4th, the List and Clark Construction Company received a \$73,397.92 contract for the bridge's erection. Completed later that year, the structure has since carried moderate to heavy traffic loads on State Highway 34, a main route between western Wayne County and southeastern Reynolds County. List and Clark's bridge replaced an earlier structure that had been built in 1913. A steel truss of unknown configuration, the 1913 bridge at the site was erected by the Vincennes Bridge Company for \$4993.00. The current Leeper Bridge appears largely unchanged from its original construction.

Many of the large-scale bridges designed by the Missouri State Highway Department in the 1920s and 1930s were replacements for earlier county-built structures. The Leeper Bridge ranks among the longest of these multiple-span steel truss bridges built during this period. The rigid-connected Parker and Pratt trusses that comprise the bridge feature standard MSHD design, but this bridge is distinguished by its multiplicity and diversity of spans, overall structure length and its high degree of physical integrity.

NAME(S) OF STRUCTURE

Leeper Bridge (Black River Bridge)

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP



SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. J 935; Missouri Highway and Transportation Department, Primary System Bridge Record, located at the Bridge Division, MHTD, Jefferson City MO; Wayne County Court Record 8: page 185 (20 December 1911), page 224 (27 February 1912), page 279 (24 May 1912), page 292 (31 May 1912), page 600 (22 May 1913), located at the Wayne County Courthouse, Greenville MO; Missouri State Highway Commission, Ninth Biennial Report: 1933-34, pages 185-87; field inspection by Richard Collier and Carl McWilliams, 31 March 1992.

INVENTORIED BY

Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE

11 May 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Wappapello Bridge (St. Francis River Bridge)
MHTD: 069000.5

WAYN04

DATE(S) OF CONSTRUCTION

1911

LOCATION

County Road 69 over St. Francis River; S2, T26N, R7E
0.5 mile south of Wappapello; Wayne County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / abandoned

RATING NRHP potentially eligible (score: 67)

CONDITION

fair (bridge closed)

OWNER

Wayne County

span number: 1
span length: 210.0'
total length: 280.0'
roadway wdt.: 13.3'

superstructure: steel, 10-panel, pin-connected Pennsylvania through truss, with steel stringer approach spans
substructure: concrete abutments (below grade); concrete-filled steel cylinder piers under main span; timber pile bent piers under approach spans
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with 2-angle bracing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; portal builder's plate: 1911 Built By Stupp Bro's Bridge & Iron Company St. Louis Mo; bridge plate (south end): Class B

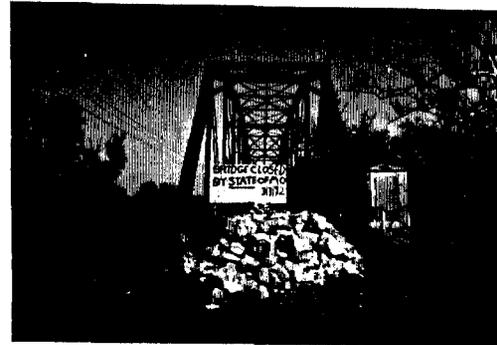
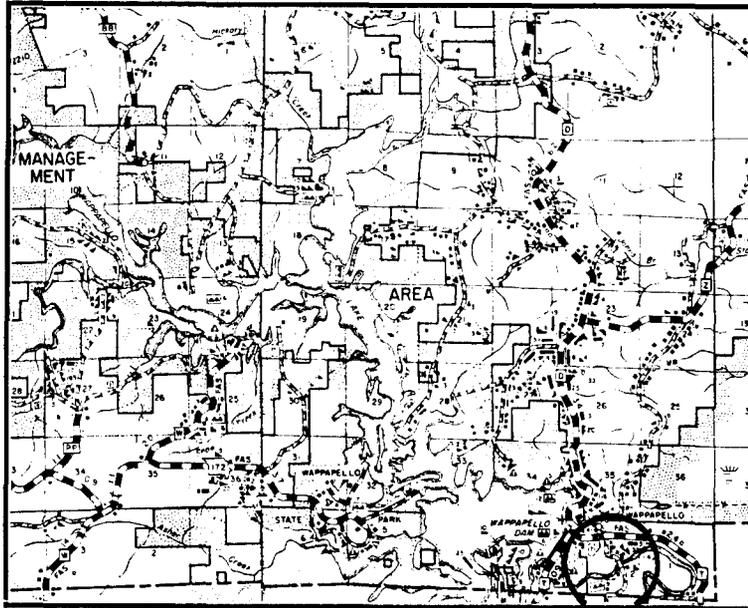
This long-span truss crosses the St. Francis River about ½ mile below the Wappapello Dam, in extreme southeastern Wayne County. A pin-connected Pennsylvania through truss, the structure is supported by concrete-filled steel cylinder piers and concrete abutments. Efforts to build the bridge began in the summer of 1910. That August the Wayne County Court determined to build two bridges across the St. Francis River. One would be located near Lone Rock; the other was this crossing just south of Wappapello. Newt Bennet, the county highway engineer, was directed to view both bridge sites, estimate the structures' cost and prepare specifications. After soliciting competitive bids, the county court awarded a contract to fabricate and erect the two trusses to the Stupp Brothers Bridge and Iron Company of St. Louis. Stupp Brothers, which dominated bridge construction in Wayne County during the period, completed the crossings in 1911 for an aggregate cost of \$8170.00. The Lone Rock Bridge has since been replaced, but the Wappapello Bridge appears much the same today as when it was built. Crude waferboard signs set at each approach note that the crossing was closed to traffic on March 3, 1992. There is strong local sentiment to have the bridge reopened, but its future is currently unclear.

Named after the Pennsylvania Railroad, which used it extensively, the Pennsylvania [Petit] truss configuration is a subtype of the basic Pratt truss, with subdivided panels. "It is comparatively simple," stated Bridge Engineer W.A.L. Waddell in his seminal book, **Bridge Engineering**, "and, like the Pratt truss, it is economical of metal and lends itself readily to the connection of the floor and lateral systems." Though not especially exotic structurally, Pennsylvania trusses were typically employed for long-span applications. As a result, relatively few were ever erected in Missouri. Fewer yet remain in place today; less than ten have been identified by the statewide bridge inventory.

The Wappapello Bridge is thus technologically significant as a well-preserved example of this uncommon long-span structural type. Although recently closed, it has served historically as a regionally important crossing of a major river - an important resource in Missouri highway history.

NAME(S) OF STRUCTURE

Wappapello Bridge

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 069000.5; Wayne County Court Record, Book 7, page 553 (25 August 1910); Book 8, page 124 (29 August 1911), page 160 (21 November 1911), located at the Wayne County Courthouse, Greenville MO; W.A.L. Waddell, *Bridge Engineering* (London: John Wiley and Sons, 1916); field inspection by Carl McWilliams and Richard Collier, 31 March 1992.

INVENTORIED BY

Carl McWilliams

AFFILIATION

Fraserdesign, Loveland CO

DATE11 May 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Duncan Ford Bridge (Black River Bridge)
MHTD: 090001.1

WAYN05

DATE(S) OF CONSTRUCTION

1912-13

LOCATION

County Road 90 over Black River; S29, T27N, R5E
1.0 mile south of Williamsville; Wayne County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP potentially eligible (score: 63)

CONDITION

fair

OWNER

Wayne County

span number: 1
span length: 190.0'
total length: 229.0'
roadway wdt.: 15.7'

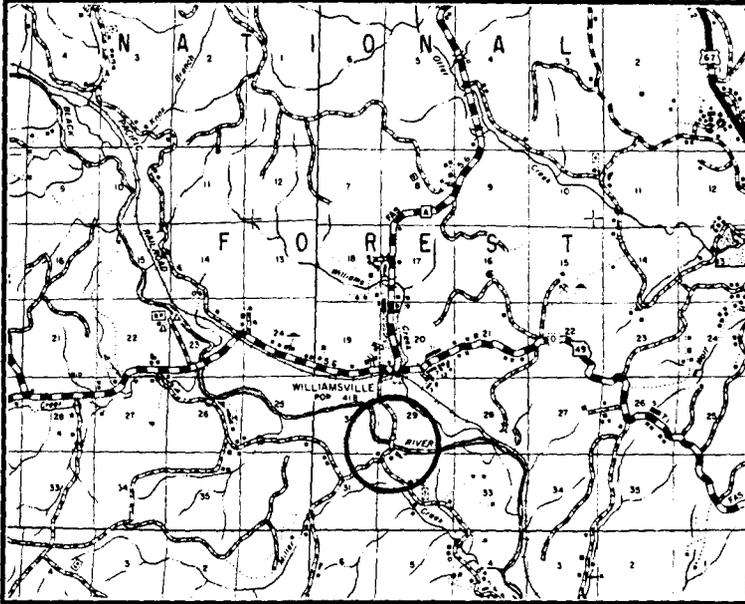
superstructure: steel, 10-panel, pin-connected Pennsylvania through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers under main span; concrete piers under approach spans
floor/decking: timber deck over steel stringers
other features: upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 4 angles with X-bracing between; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

On December 20, 1911, the Wayne County Court decided that a steel bridge was needed across the Black River 3/4 mile south of Williamsville, in the southwestern corner of the county. The court ordered the county highway engineer to measure the site, determine the proposed bridge's dimensions and estimate its probable cost. This work was duly carried out, and in February 1912 the court advertised for competitive bids to fabricate and erect the long-span truss. On May 24th proposals for the structure's construction were opened. With a bid of \$4193.00, the Vincennes Bridge Company of Vincennes, Indiana, was the successful proposer. That same day Vincennes received another contract to build a smaller bridge across McKenzie Creek near Piedmont. The Duncan Ford Bridge took almost exactly one year to complete. In May 1913, Vincennes was paid \$5835.00 for the Duncan Ford and the McKenzie Creek bridges. Citing structural deterioration of the truss and its approach spans, the county in 1984 developed plans to replace the Duncan Ford Bridge, but has not to date undertaken the construction. The steel truss continues to carry local traffic, little changed from its original construction.

Serving as a major crossing for eighty years, the Duncan Ford Bridge is historically significant for its longstanding role in the development of regional transportation. The structure's channel span is technologically noteworthy as a well-preserved example of a Pratt truss subtype - the Pennsylvania truss. With its polygonal top chord and subdivided panels, the truss exemplifies this relatively uncommon structural type, which was used primarily for long-span applications after the turn of the century. The Duncan Ford Bridge is a significant Missouri roadway span.

NAME(S) OF STRUCTURE

Duncan Ford Bridge (Black River Bridge)

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 090001.1; Wayne County Court Record, Book 8, page 185 (20 December 1911), page 224 (27 February 1912), page 279 (24 May 1912), page 292 (31 May 1912), page 600 (22 May 1913), page 600 (22 May 1913), located at the Wayne County Courthouse, Greenville MO; "County Makes Plans To Replace 1909 Bridge Near Williamsville", Wayne County Journal-Banner, Piedmont, Missouri (1 November 1984); field inspection by Carl McWilliams and Richard Collier, 31 March 1992.

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