

BUCHANAN COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
BUCH01	G 856	Garrettsburg Bridge	(replaced)
BUCH02	K 33	102 River Bridge	3- 90' 1932 riveted Warren pony truss Gerard Knutson
*BUCH03	K 590	U.S. Highway 59 Overpass	7-115' 1937 steel plate through girder Sandy Hites
BUCH04	K 673	CRI&P Railroad Overpass	1-150' 1937 riveted Parker through truss List and Clark Construc. Co.
*BUCH05	K 697R	Atchison Bridge	2-474' 1937 riveted cantilever through truss Wisconsin B&I Company et al.
BUCH06	S 787	Castile Creek Bridge	1-100' 1934 riveted Warren pony truss Martin Wunderlich
BUCH07	T 365	Platte River Bridge	1-120' 1934 riveted Pratt through truss Martin Wunderlich
*BUCH08	W 444	Bee Creek Bridge	1- 50' 1922 concrete Luten arch Topeka Bridge and Constr. Co.
BUCH09	Y 10	Brady Branch Bridge	3- 28' 1922 concrete Luten arch Topeka Bridge and Constr. Co.
BUCH10	Z 336	Bridge	1- 21' c1925 concrete arch culvert
*BUCH11	045001.6	102 River Bridge	1-150' c1925 riveted Pratt through truss
*BUCH12	045001.8	Platte River Bridge	(replaced)
*BUCH13	055003.3	Platte River Bridge	(replaced)
BUCH14	056000.5	Platte River Bridge	1-100' c1925 riveted Pratt through truss
*BUCH15	056002.1	James Branch Bridge	(replaced)
BUCH16	063000.2	Bridge	(replaced)
*BUCH17	064000.6	Bridge	(replaced)
BUCH18	083000.8	Muddy Creek Bridge	(replaced)
BUCH19	104000.1	Malden Creek Bridge	1- 60' 1902 pinned Pratt half-hip pony truss John H. Sparks, St. Joseph MO
*BUCH20	116000.4	Jenkins Creek Bridge	1- 50' 1917 concrete filled spandrel arch
*BUCH21	117001.7	Malden Creek Bridge	(replaced)
BUCH22	117002.3	Wolf Pen Creek Bridge	1- 27' c1920 concrete arch culvert
BUCH23	160001.1	Whitehead Creek Bridge	(replaced)
BUCH24	166000.0	Whitehead Creek Bridge	(replaced)
BUCH25	174000.2	Whitehead Creek Bridge	1- 73' c1910 pinned Pratt pony truss
*BUCH26	187001.4	Contrary Creek Bridge	1-133' 1888 pinned Pratt through truss Wrought Iron Bridge Co., Canton

BUCHANAN COUNTY

INCLUDED (cont.):

*BUCH27	191000.2	Bridge	1- 24'	concrete filled spandrel arch
			1916	
*BUCH28	206000.4	Contrary Creek Bridge	1-100'	pinned Pratt through truss
			c1890	
BUCH29	224001.6	Bridge		(replaced)
*BUCH30	273001.7	Contrary Creek Bridge	1- 80'	2-angle Camelback pony truss
			c1930	St. Joseph Struct. Steel (prob.)
*BUCH31	290000.8	Willis Bridge		(replaced)
*BUCH32	297000.5	Bee Creek Bridge		(replaced)
BUCH33	352000.8	Malden Creek Bridge		(replaced)
BUCH34	359000.2	Malden Creek Bridge		(replaced)
*BUCH35	386500.1	Cook Road Bridge	1- 80'	pinned Pratt through truss
			c1900	
*BUCH36	386500.2	Great Western Viaduct	3- 35'	concrete deck girder
			1927	Carrother and Huggins
*BUCH37	386500.6	Eleventh Street Underpass	1- 42'	concrete deck girder
			1927	
BUCH38	386500.8	Eighteenth Street Underpass	1- 30'	concrete deck girder
			1927	Whitham Const. Co., St. Joseph
*BUCH39	386501.4	King Hill Underpass	3- 44'	concrete deck girder
			1927	Whitham Const. Co., St. Joseph
*BUCH40	386501.9	Parker Road Bridge	1- 80'	pinned Pratt through truss
			c1885	
*BUCH41	386502.2	Bridge	1- 32'	concrete filled spandrel arch
			c1925	
*BUCH42	386502.5	Whitehead Creek Bridge	1- 30'	concrete open spandrel arch
			1927	W.A. Abrams, Unionville MO

EXCLUDED:

Pratt pony truss
074001.7

Warren pony truss
G 307

Steel stringer

F 171R1	K 681	K 794	L 246	L 351	S 115	S 445
S 785	S 786	S 866	T 233	T 861	X 598	X 599
001500.1	068000.8	099001.8	124500.1	159001.7	235000.3	270001.6
271000.8	380500.2	386501.8	386502.8			

Concrete girder

H 345R	K 475	386500.3	386501.5
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BUCHANAN COUNTY

EXCLUDED (cont.):

Concrete slab

F 172R 386500.4 218000.6 380500.1 386502.4 386502.5

Concrete box culvert

F 837R G 373R G 381 G 857 K 525 K 526 K 547R
 K 726 L 6 X 600 X 753 323000.1

Timber stringer

093000.6

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	8	10	9	0	27
Excluded	28	11	8	0	47
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	36	21	17	0	74 structures

102 River Bridge

BUCH02

GENERAL DATA

structure no.:	K 33	city/town:	5.0 miles northeast of St. Joseph
county:	Buchanan	feature inters.:	102 River
		cadastral grid:	S6, T57N, R34W
		highway route:	State Highway 6
		highway distr.:	3
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 5-panel, rigid-connected Warren pony truss		
substructure:	concrete abutments, wingwalls and piers		
span number:	3	condition:	good
span length:	90.0'	alterations:	none
total length:	279.0'	floor/decking :	concrete deck over steel stringers
roadway width:	22.0'	other features:	steel angle guardrails

HISTORICAL DATA

erection date:	1932
erection cost:	\$32,004.76
designer:	Missouri State Highway Department
fabricator :	unknown
contractor :	Gerard Knutson
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 33; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.
sign. rating:	46
evaluation:	NRHP non-eligible (typically configured, multiple-span example of MSHD standardized truss design)

inventoried by: Clayton B. Fraser 18 August 1992

U.S. Highway 59 Overpass

BUCH03

GENERAL DATA

structure no.:	K 590	city/town:	1.5 miles northeast of Kenmoor
county:	Buchanan	feature inters.:	Burlington and Rock Island Railroads
		cadastral grid:	S15/22, T56N, R36W
		highway route:	U.S Highway 59
		highway distr.:	1
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel plate through girder with continuous ends		
substructure:	concrete abutments, wingwalls and spill-through piers		
span number:	5; 1; 1	condition:	good
span length:	115';100';80'	alterations:	none
total length:	770.0'	floor/decking :	concrete deck over steel stringers
roadway width:	24.0'	other features:	girder: steel plate with 2-angle flanges, top and bottom, and cover plate; stringer: I-beam; bottom lateral bracing: angle; bridge plate: MISSOURI HIGHWAY DEPT BRIDGE No K-590 1936

HISTORICAL DATA

erection date:	1936-37
erection cost:	\$113,402.60
designer:	Missouri State Highway Department
fabricator :	unknown
contractor :	Sandy Hites
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 590; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Tenth Biennial Report of the State Highway Commission of Missouri, 1935-36, pages 55-56, 263; field inspection by Lon Johnson, 7 August 1990.
sign. rating:	60
evaluation:	NRHP possibly eligible (one of longest examples in state of this MSHD beam bridge type)

inventoried by: Clayton B. Fraser 26 March 1992

CRI&P Railroad Overpass

BUCH04

GENERAL DATA

structure no.:	K 673	city/town:	0.7 mile southwest of Rushville
county:	Buchanan	feature inters.:	Chicago, Rock Island and Pacific Railroad
		cadastral grid:	S15, T55N, R37W
		highway route:	U.S. Highway 59
		highway distr.:	1
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 8-panel, rigid-connected Parker through truss, with six concrete deck girder approach spans		
substructure:	concrete abutments, wingwalls and piers		
span number:	1	condition:	good
span length:	150.0'	alterations:	none
total length:	407.0'	floor/decking :	concrete deck over steel stringers
roadway width:	24.0'	other features:	concrete guardrails

HISTORICAL DATA

erection date:	1937
erection cost:	\$46,515.66
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	List and Clark Construction Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 673; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.
sign. rating:	41
evaluation:	NRHP non-eligible (typically configured example of MSHD standard truss design)

inventoried by: Clayton B. Fraser 26 March 1992

Atchison Bridge

BUCH05

GENERAL DATA

structure no.: K 697R	city/town: Winthrop MO / Atchison KS
county: Buchanan	feature inters.: Missouri River
	cadastral grid: S19, T55N, R37W
	highway route: U.S. Highway 59
	highway distr.: 1
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 11-panel, rigid-connected cantilever through truss with 2, 7-panel, rigid-connected Warren deck trusses at each end; 3 steel stringer and 3 steel girder approach spans at west end; 4 steel stringer approach spans at east end

substructure: concrete abutments, wingwalls and piers

span number: 2	condition: excellent
span length: 474.0'	alterations: repainted
total length: 1339.0'	floor/decking : grating covered by corrugated steel and asphalt over steel stringers
roadway width: 24.0'	other features: upper chord and inclined end post: 2 channels with cover plate and lacing or 4 built-up angles with cover and batten plates or 2 channels with double lacing; lower chord: 4 built-up angles with lacing and batten plates; vertical: 4 angles with batten plate or 2 channels with lacing or 4 built-up angles with double lacing or 2 channels with batten plates; hip vertical: 4 built up angles with lacing; diagonal: 4 angles with batten plates or 4 built up angles with lacing or 2 channels with batten plates or 4 built-up angles with batten plates; lateral bracing: 2 angles with lacing at top; 2 angles at bottom; strut: 2 angles with lacing; floor beam: I-beams; guardrail: steel balustrade

HISTORICAL DATA

erection date: 1937-38
erection cost: \$669,838.96
designer: Missouri State Highway Commission Bureau of Bridges
fabricator : unknown
contractor: Wisconsin Bridge and Iron Company, Milwaukee WI

Atchison Bridge

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 697R; Files on primary system bridges located at the Missouri Highway and Transportation Department, Jefferson City MO; "Free Bridge at Atchison Now in Use," **St. Joseph News-Press**, 3 July 1938; **Eleventh Biennial Report of the State Highway Commission of Missouri**, 1937-38, pp. 168 and 170; "Z.E. Jackson Led Nine-Year Battle to Obtain Bridge," **St. Joseph News-Press**, 17 September 1938; J.A.L. Waddell, **De Pontibus: A Pocket-Book for Bridge Engineers** (New York: John Wiley & Sons, 1898); field inspection by Lon Johnson, 14 September 1990.

sign. rating: 62

evaluation: NRHP possibly eligible (well-preserved example of a long-span highway bridge)

inventoried by: Clayton B. Fraser 26 March 1992

Castile Creek Bridge

BUCH06

GENERAL DATA

structure no.:	S 787	city/town:	7.1 miles southeast of Agency
county:	Buchanan	feature inters.:	Castile Creek
		cadastral grid:	S24/25, T55N, R34W
		highway route:	State Highway 116
		highway distr.:	1
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, 5-panel, rigid-connected Warren pony truss, with steel stringer approach spans		
substructure:	concrete abutments, wingwalls and piers		
span number:	1	condition:	good
span length:	100.0'	alterations:	none
total length:	404.0'	floor/decking :	concrete deck over steel stringers
roadway width:	24.0'	other features:	steel angle guardrails

HISTORICAL DATA

erection date:	1933-34
erection cost:	\$29,732.70
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Martin Wunderlich
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number S 787; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.
sign. rating:	43
evaluation:	NRHP non-eligible (typically configured, long-span example of MSHD standardized truss design)

Inventoried by: Clayton B. Fraser 26 March 1992

Platte River Bridge

BUCH07

GENERAL DATA

structure no.:	T 365	city/town:	7.2 miles southeast of Agency
county:	Buchanan	feature inters.:	Platte River
		cadastral grid:	S25/26, T55N, R34W
		highway route:	Missouri State Highway 116
		highway distr.:	1
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	steel, rigid-connected Pratt through truss, with 12 steel stringer approach spans		
substructure:	concrete abutments, wingwalls and piers		
span number:	1	condition:	good
span length:	120.0'	alterations:	none
total length:	663.0'	floor/decking :	concrete deck over steel stringers
roadway width:	20.0'	other features:	steel guardrails

HISTORICAL DATA

erection date:	1933-34
erection cost:	\$39,469.70
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Martin Wunderlich
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number T 365; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.
sign. rating:	41
evaluation:	NRHP non-eligible (typically configured example of MSHD standardized truss design)

Inventoried by: Clayton B. Fraser 26 March 1992

Bee Creek Bridge

BUCH08

GENERAL DATA

structure no.:	W 444	city/town:	6.0 miles southwest of Agency
county:	Buchanan	feature inters.:	Bee Creek
		cadastral grid:	S21/24, T55N, R34/35W
		highway route:	State Supplementary Route Y
		highway distr.:	1
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	concrete Luten arch		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	50.0'	alterations:	none
total length:	90.0'	floor/decking :	concrete deck over earth fill
roadway width:	18.0'	other features:	roadway cantilevered on tapered brackets from arch spandrels; guardrails: cast concrete balusters with solid concrete bulkheads

HISTORICAL DATA

erection date:	1922
erection cost:	\$12,478.00
designer:	Topeka Bridge and Construction Company, Topeka KS (based on patent by Daniel B. Luten, Indianapolis IN)
fabricator :	none
contractor:	Topeka Bridge and Construction Company, Topeka KS
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number W 444; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Third Biennial Report of the Missouri State Highway Commission , 1921-22, page 129; field inspection by Lon Johnson, 14 September 1990.
sign. rating:	58
evaluation:	NRHP possibly eligible (well-preserved example of patented concrete bridge type)

inventoried by: Clayton B. Fraser 26 March 1992

Brady Branch Bridge

BUCH09

GENERAL DATA

structure no.: Y 10	city/town: 7.9 miles southwest of Agency
county: Buchanan	feature inters.: branch of Bee Creek
	cadastral grid: S31/36, T55N, R34/35W
	highway route: State Supplementary Route Y
	highway distr.: 1
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: concrete Luten arch	
substructure: concrete abutments and wingwalls	
span number: 3	condition: good
span length: 28.0'	alterations: none
total length: 97.0'	floor/decking : concrete deck over earth fill
roadway width: 18.2'	other features: roadway cantilevered on tapered brackets from arch spandrels; guardrails: cast concrete balusters with solid concrete bulkheads

HISTORICAL DATA

erection date: 1922	
erection cost: \$10,957.50	
designer: Topeka Bridge and Construction Company, Topeka KS (based on patent by Daniel B. Luten, Indianapolis IN)	
fabricator : none	
contractor: Topeka Bridge and Construction Company, Topeka KS	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number Y 10; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Third Biennial Report of the Missouri State Highway Commission, 1921-22, page 129.	
sign. rating: 58	
evaluation: NRHP possibly eligible (well-preserved, multiple-span example of patented concrete arch design)	

inventoried by: Clayton B. Fraser 26 March 1992

Bridge

BUCH10

GENERAL DATA

structure no.:	Z 336	city/town:	0.4 mile east of Easton
county:	Buchanan	feature inters.:	unnamed stream
		cadastral grid:	S29/30, T57N, R33W
		highway route:	State Supplementary Route N
		highway distr.:	1
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure:	concrete arch culvert, skewed		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	21.0'	alterations:	unknown
total length:	24.0'	floor/decking :	concrete deck
roadway width:	29.6'	other features:	concrete guardrails with incised panels

HISTORICAL DATA

erection date:	c1925
erection cost:	unknown
designer:	Missouri State Highway Department
fabricator :	none
contractor:	unknown
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number Z 336.
sign. rating:	18
evaluation:	NRHP non-eligible (undistinguished example of small-scale concrete culvert design)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

102 River Bridge

BUCH11

GENERAL DATA

structure no.: 045001.6	city/town: 6.0 miles east of St. Joseph
county: Buchanan	feature inters.: 102 River
	cadastral grid: S17, T57N, R34W
	highway route: County Road 45
	highway distr.: 1
	current owner: Buchanan County

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss, skewed, with steel stringer and steel girder approach spans	
substructure: stone abutments; steel pile bent and concrete piers	
span number: 1	condition: good
span length: 150.0'	alterations: unknown
total length: 219.0'	floor/decking : timber deck over steel stringers
roadway width: 17.0'	other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 4 angles with batten plates; vertical: 2 channels with lacing; diagonal: 2 or 4 angles with batten plates; lateral bracing: 1 angles; strut: 2 angles, braced; portal strut: angle lattice; floor beam: I-beam, field-bolted to vertical; guardrail: steel pipe

HISTORICAL DATA

erection date: c1925	
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 Number 045001.6; field inspection by Lon Johnson, 7 September 1990.	
sign. rating: 42	
evaluation: NRHP non-eligible (uncommon skewed configuration, but inadequately documented and typically designed)	

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Platte River Bridge

BUCH14

GENERAL DATA

structure no.:	056000.5	city/town:	9.4 miles southeast of St. Joseph
county:	Buchanan	feature inters.:	Third Fork of the Platte River
		cadastral grid:	S35, T57N, R34W
		highway route:	County Road 56
		highway distr.:	1
		current owner:	Buchanan County

STRUCTURAL DATA

superstructure:	steel, 5-panel, rigid-connected Pratt through truss, with steel stringer approach spans		
substructure:	steel pile bent piers with timber wingwalls		
span number:	1	condition:	good
span length:	100.0'	alterations:	unknown
total length:	136.0'	floor/decking :	timber deck over steel stringers
roadway width:	18.2'	other features:	steel angle guardrails

HISTORICAL DATA

erection date:	c1925
erection cost:	unknown
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	unknown
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 056000.5.
sign. rating:	23
evaluation:	NRHP non-eligible (typically configured, inadequately documented example of MSHD standard truss design)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Malden Creek Bridge

BUCH19

GENERAL DATA

structure no.: 104000.1	city/town: 4.3 miles southeast of Easton
county: Buchanan	feature inters.: Malden Creek
	cadastral grid: S16, T56N, R33W
	highway route: County Road 104
	highway distr.: 1
	current owner: Buchanan County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt half-hip pony truss	
substructure: unknown	
span number: 1	condition: fair
span length: 60.0'	alterations: unknown
total length: 62.0'	floor/decking : timber deck
roadway width: 16.0'	other features: timber guardrails

HISTORICAL DATA

erection date: 1902
erection cost: \$389.00
designer: unknown
fabricator : unknown
contractor: John H. Sparks, St. Joseph MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 104000.1; Buchanan County Court Record, Book 30: n.p. (6 August 1902) - located at Buchanan County Courthouse, St. Joseph MO.

sign. rating: 40
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Jenkins Creek Bridge

BUCH20

GENERAL DATA

structure no.:	116000.4	city/town:	7.3 miles southeast of Easton
county:	Buchanan / Clinton	feature inters.:	Jenkins Creek
		cadastral grid:	S33/34, T56N, R33W
		highway route:	County Road 116
		highway distr.:	1
		current owner:	Buchanan County

STRUCTURAL DATA

superstructure:	concrete filled spandrel arch, skewed		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	50.0'	alterations:	none
total length:	82.0'	floor/decking :	concrete deck over earth fill
roadway width:	20.3'	other features:	concrete guardrails with incised panels

HISTORICAL DATA

erection date:	1917
erection cost:	unknown
designer:	unknown
fabricator :	none
contractor :	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 116000.4; Buchanan County Court Record, Book 27: page 451 (20 May 1895); Book 28: page 309 (24 February 1899); Book 40: n.p. (10 May 1917) - located Buchanan County Courthouse, St. Joseph MO; field inspection by Lon Johnson, 7 September 1990.

sign. rating:	34
evaluation:	NRHP non-eligible (inadequately documented example of concrete arch construction)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Wolf Pen Creek Bridge

BUCH22

GENERAL DATA

structure no.:	117002.3	city/town:	7.0 miles southeast of Easton
county:	Buchanan	feature inters.:	Wolf Pen Creek
		cadastral grid:	S33, T56N, R33W
		highway route:	County Road 117
		highway distr.:	1
		current owner:	Buchanan County

STRUCTURAL DATA

superstructure:	concrete arch culvert		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	fair
span length:	27.0'	alterations:	none
total length:	30.0'	floor/decking :	concrete deck over earth fill
roadway width:	19.8'	other features:	guardrails: none

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 117002.3.

sign. rating:	18
evaluation:	NRHP non-eligible (poorly documented, small-scale example of concrete arch construction)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Whitehead Creek Bridge

BUCH25

GENERAL DATA

structure no.: 174000.2	city/town: 3.8 miles southeast of St. Joseph
county: Buchanan	feature inters.: Whitehead Creek
	cadastral grid: S34/35, T57N, R35W
	highway route: County Road 174
	highway distr.: 1
	current owner: Buchanan County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss	
substructure: concrete-filled steel cylinder piers	
span number: 1	condition: fair
span length: 73.0'	alterations: unknown
total length: 108.0'	floor/decking : timber deck
roadway width: 14.0'	other features: steel lattice 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 Number 174000.2.

sign. rating: 28
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Contrary Creek Bridge

BUCH26

GENERAL DATA

structure no.: 187001.4	city/town: 1.0 mile south of St. Joseph
county: Buchanan	feature inters.: Contrary Creek
	cadastral grid: S7, T56N, R35W
	highway route: County Road 187
	highway distr.: 1
	current owner: Buchanan County

STRUCTURAL DATA

superstructure: wrought iron, 9-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments with timber back- and wingwalls

span number: 1	condition: fair
span length: 133.0'	alterations: truss moved to this location
total length: 135.0'	floor/decking : timber deck over timber 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: 2 channels with double lacing (2 round eyerods at hip); diagonal: 2 square eyebars; counter: round rod with turnbuckle; strut: steel pipe; portal strut: lattice with decorative cast iron knee braces; lateral bracing: round rod; floor beam: tapered "fishtail" girder, U-bolted to lower chord pin; guardrail: timber

HISTORICAL DATA

erection date: 1888 (possible)
erection cost: unknown
designer: Wrought Iron Bridge Company, Canton OH (probable)
fabricator : Wrought Iron Bridge Company, Canton OH (probable)
contractor: Wrought Iron Bridge Company, Canton OH (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 187001.4; Buchanan County Court Record, Book 20: page 205 (17 October 1888), located at the Buchanan County Courthouse, St. Joseph MO; field inspection by Lon Johnson, 7 September 1990.

sign. rating: 45
evaluation: NRHP possibly eligible (early example of early wrought iron truss construction, moved to this location)

inventoried by: Clayton B. Fraser 26 March 1992

Bridge

BUCH27

GENERAL DATA

structure no.: 191000.2 city/town: 6.5 miles southwest of St. Joseph
county: Buchanan feature inters.: branch of Horseshoe Lake
cadastral grid: S12, T56N, R36W
highway route: County Road 191
highway distr.: 1
current owner: Buchanan County

STRUCTURAL DATA

superstructure: concrete filled spandrel arch
substructure: concrete abutments and wingwalls

span number: 1 condition: good
span length: 24.0' alterations: roadway widened on cantilevered concrete
total length: 30.0' brackets
roadway width: 24.0' floor/decking : concrete deck
other features: concrete guardrails with incised rectangular
panels

HISTORICAL DATA

erection date: 1916
erection cost: unknown
designer: unknown
fabricator : none
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory
and Appraisal: Structure Number 191000.2; field inspection by Lon
Johnson, 7 September 1990.

sign. rating: 26
evaluation: NRHP non-eligible (small-scale example of concrete arch construction,
poorly documented and substantially altered)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Contrary Creek Bridge

BUCH28

GENERAL DATA

structure no.:	206000.4	city/town:	7.0 miles southwest of St. Joseph
county:	Buchanan	feature inters.:	Contrary Creek drainage ditch
		cadastral grid:	S3/4, T56N, R36W
		highway route:	County Road 206
		highway distr.:	1
		current owner:	Buchanan County

STRUCTURAL DATA

superstructure: steel or iron, pin-connected Pratt through truss, with timber stringer approach span

substructure: timber pile bent abutments, wingwalls and pier

span number:	1	condition:	fair
span length:	100.0'	alterations:	truss moved to this location
total length:	120.0'	floor/decking :	timber deck over timber stringers
roadway width:	12.1'	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 round eyerods at hip); diagonal: 2 rectangular eyebars; counter: 2 round eyerods with turnbuckles; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing, knee braced; portal strut: lattice with knee braces; floor beam: tapered "fishtail" plate girder, U-bolted to lower chord pins; guardrail: steel pipe

HISTORICAL DATA

erection date: c1890
erection cost: unknown
designer: unknown
fabricator : Oliver Iron Works
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 206000.4; field inspection by Lon Johnson, 7 September 1990.

sign. rating: 22
evaluation: NRHP non-eligible (evidently an early example of pinned truss construction, but poorly documented and moved to this location)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Contrary Creek Bridge

BUCH30

GENERAL DATA

structure no.: 273001.7	city/town: 2.0 miles northeast of DeKalb
county: Buchanan	feature inters.: Contrary Creek
	cadastral grid: S1/12, T55N, R36W
	highway route: County Road 273
	highway distr.: 1
	current owner: Buchanan County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected, two-angle Camelback pony truss
substructure: concrete abutments and wingwalls

span number: 1	condition: good
span length: 80.0'	alterations: none
total length: 80.0'	floor/decking : concrete deck over steel stringers
roadway width: 18.0'	other features: upper chord and inclined end post: 2 angles; lower chord: 2 angles; vertical: 2 angles; diagonal: 2 angles; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: steel angle

HISTORICAL DATA

erection date: c1930
erection cost: unknown
designer: St. Joseph Structural Steel Works, St. Joseph MO (probable)
fabricator : St. Joseph Structural Steel Works, St. Joseph MO (probable);
Inland Steel Company, East Chicago IN
contractor : St. Joseph Structural Steel Works, St. Joseph MO (probable)
references: Missouri Highway and Transportation Department, Structure Inventory
and Appraisal: Structure Number 273001.7; field inspection by Lon
Johnson, 7 September 1990.
sign. rating: 34
evaluation: NRHP non-eligible (poorly documented example of relatively uncommon
truss configuration)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Cook Road Bridge

BUCH35

GENERAL DATA

structure no.:	386500.1	city/town:	east edge of St. Joseph
county:	Buchanan	feature inters.:	102 River
		cadastral grid:	S30/31, T58N, R34W
		highway route:	vacated Cook Road
		highway distr.:	1
		current owner:	City of St. Joseph

STRUCTURAL DATA

superstructure:	steel, 6-panel, pin-connected Pratt through truss, with steel and timber stringer approach spans		
substructure:	steel pile bent piers with timber wingwalls; timber pile bent piers		
span number:	1	condition:	poor
span length:	80.0'	alterations:	bridge burned; deck and stringers removed
total length:	190.0'	floor/decking :	decking and stringers removed
roadway width:	13.0'	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 square eyebars at hip); diagonal: 2 rectangular eyebars; counter: 2 square eyebars with turnbuckles; lateral bracing: round rod with threaded ends; strut: I-beam; portal strut: lattice; floor beam: I-beam, U-bolted to lower chord pin; guardrail: steel angle

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 386500.1; field inspection by Lon Johnson, 13 September 1990.
sign. rating:	16
evaluation:	NRHP non-eligible (poorly preserved, poorly documented example of common structural type)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Eleventh Street Underpass

BUCH37

GENERAL DATA

structure no.:	386500.6	city/town:	St. Joseph
county:	Buchanan	feature inters.:	Maple Leaf Parkway (Corby Parkway)
		cadastral grid:	S5, T57N, R35W
		highway route:	Eleventh Street
		highway distr.:	1
		current owner:	City of St. Joseph

STRUCTURAL DATA

superstructure:	concrete deck girder, skewed		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	42.0'	alterations:	none
total length:	45.0'	floor/decking :	concrete deck
roadway width:	36.0'	other features:	concrete guardrails with slotted cutouts; arched spandrel girders with corbeled, faux arch rings

HISTORICAL DATA

erection date:	1927
erection cost:	unknown
designer:	W.G. Fowler
fabricator :	none
contractor :	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 386500.6; **Your Parks - How They Were Developed and How They Are Operated**, typewritten manuscript, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; Special Ordinances Book 20, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990.

sign. rating:	53
evaluation:	NRHP possibly eligible (well-preserved structure built as part of citywide parks project)

Inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Eighteenth Street Underpass

BUCH38

GENERAL DATA

structure no.:	386500.8	city/town:	St. Joseph
county:	Buchanan	feature inters.:	Maple Leaf Boulevard (Corby Boulevard)
		cadastral grid:	S4, T57N, R35W
		highway route:	Eighteenth Street
		highway distr.:	1
		current owner:	City of St. Joseph

STRUCTURAL DATA

superstructure:	concrete deck girder with curved haunches		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	30.0'	alterations:	none
total length:	33.0'	floor/decking :	concrete deck
roadway width:	30.3'	other features:	paneled concrete parapet

HISTORICAL DATA

erection date:	1927
erection cost:	unknown
designer:	W.G. Fowler
fabricator :	none
contractor :	Whitham Construction Company, St. Joseph MO
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 386500.8; Your Parks - How They Were Developed and How They Are Operated , typewritten manuscript, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; Special Ordinances Book 20, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO.
sign. rating:	41
evaluation:	NRHP non-eligible (well-preserved, relatively minor structure built as part of citywide parks project)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

King Hill Overpass

BUCH39

GENERAL DATA

structure no.: 386501.4 city/town: St. Joseph
county: Buchanan feature inters.: Second Street
cadastral grid: S29/32, T57N, R35W
highway route: King Hill Spur Drive / Mansfield Road
highway distr.: 1
current owner: City of St. Joseph

STRUCTURAL DATA

superstructure: concrete 3-rib deck girder
substructure: concrete abutments and wingwalls; concrete spill-through piers

span number: 3 condition: good
span length: 44.0' alterations: none
total length: 77.0' floor/decking : concrete deck
roadway width: 30.1' other features: concrete guardrails with square concrete balusters; arched spandrel girders; roadway cantilevered from spandrels on curved concrete brackets

HISTORICAL DATA

erection date: 1927
erection cost: \$18,000.00
designer: E.R. Grant
fabricator : none
contractor: Whitham Construction Company, St. Joseph MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 386501.4; *Your Parks - How They Were Developed and How They Are Operated*, typewritten manuscript, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; *Special Ordinances Book 20*, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990.

sign. rating: 51
evaluation: NRHP possibly eligible (well-preserved structure built as part of citywide parks project)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Parker Road Bridge

BUCH40

GENERAL DATA

structure no.:	386501.9	city/town:	St. Joseph
county:	Buchanan	feature inters.:	Contrary Creek
		cadastral grid:	S1/6, T56N, R35/36W
		highway route:	Parker Road
		highway distr.:	1
		current owner:	City of St. Joseph

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss
substructure: timber pile bent abutments and wingwalls

span number:	1	condition:	fair
span length:	80.0'	alterations:	truss perhaps moved
total length:	82.0'	floor/decking :	timber deck over timber 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: 2 channels with lacing (2 round eyebars at hip); diagonal: 2 rectangular eyebars; counter: 1 square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with kneebraces; portal strut: lattice; floor beam: plate girder, U-bolted to lower chord pin; guard-rail: timber

HISTORICAL DATA

erection date: c1885
erection cost: unknown
designer: unknown
fabricator : unknown
contractor : unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 386501.9; field inspection by Lon Johnson, 14 September 1990.

sign. rating: 27
evaluation: NRHP non-eligible (evidently early example of pinned truss construction, poorly documented and perhaps moved to this location)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Bridge

BUCH41

GENERAL DATA

structure no.:	386502.2	city/town:	St. Joseph
county:	Buchanan	feature inters.:	branch of Platte River
		cadastral grid:	S19, T57N, R34W
		highway route:	Riverside Terrace
		highway distr.:	1
		current owner:	City of St. Joseph

STRUCTURAL DATA

superstructure:	concrete filed spandrel arch		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	32.0'	alterations:	none
total length:	42.0'	floor/decking :	concrete deck over earth fill
roadway width:	18.5'	other features:	concrete guardrails with incised rectangular panels

HISTORICAL DATA

erection date:	c1925
erection cost:	unknown
designer:	unknown
fabricator :	none
contractor :	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 386502.2.

sign. rating:	18
evaluation:	NRHP non-eligible (small-scale example of concrete bridge construction)

inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

Whitehead Creek Bridge

BUCH42

GENERAL DATA

structure no.:	386502.5	city/town:	St. Joseph
county:	Buchanan	feature inters.:	North Branch of Whitehead Creek
		cadastral grid:	S22, T57N, R35W
		highway route:	Brice Street
		highway distr.:	1
		current owner:	City of St. Joseph

STRUCTURAL DATA

superstructure:	concrete, two-rib, open spandrel arch		
substructure:	concrete abutments and wingwalls; hammerhead spill-through piers		
span number:	1	condition:	good
span length:	30.0'	alterations:	none
total length:	54.0'	floor/decking :	concrete deck
roadway width:	20.1'	other features:	decorative wrought iron guardrails with paneled concrete bulkheads

HISTORICAL DATA

erection date:	1927
erection cost:	\$7892.00
designer:	W.G. Fowler
fabricator :	none
contractor:	W.A. Abrams, Unionville MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 386502.5; **Your Parks - How They Were Developed and How They Are Operated**, typewritten manuscript located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; Special Ordinances Book 20, located at the City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990; field inspection by Lon Johnson, 14 September 1990.

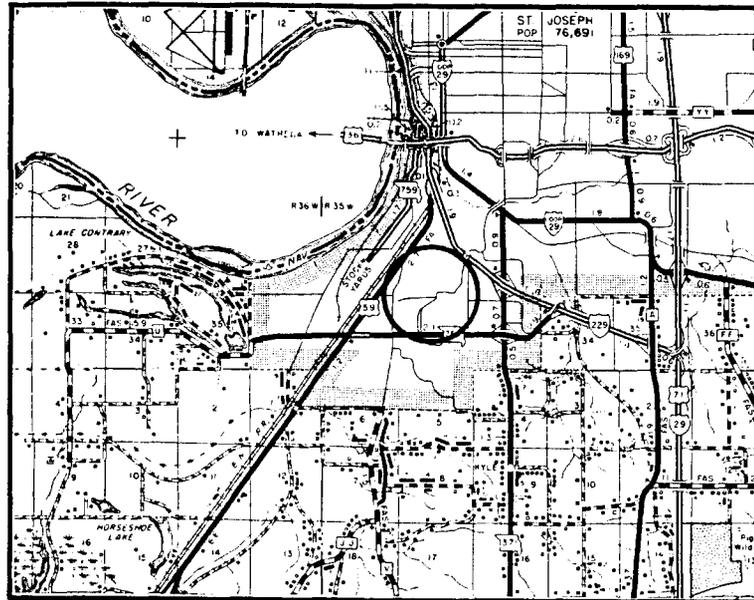
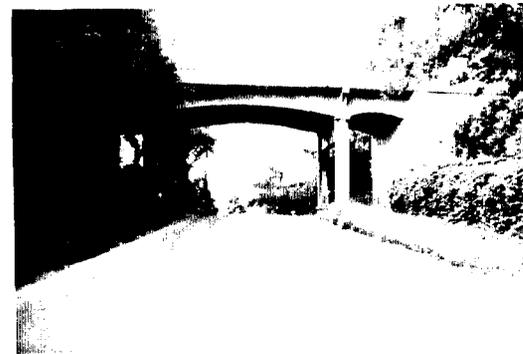
sign. rating:	46
evaluation:	NRHP possibly eligible (well-preserved, unusually configured structure built as part of citywide parks project)

Inventoried by: Clayton Fraser and Lon Johnson 26 March 1992

NAME(S) OF STRUCTURE

King Hill Overpass

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 386501.4; *Your Parks - How They Were Developed and How They Are Operated*, typewritten manuscript, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; Special Ordinances Book 20, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

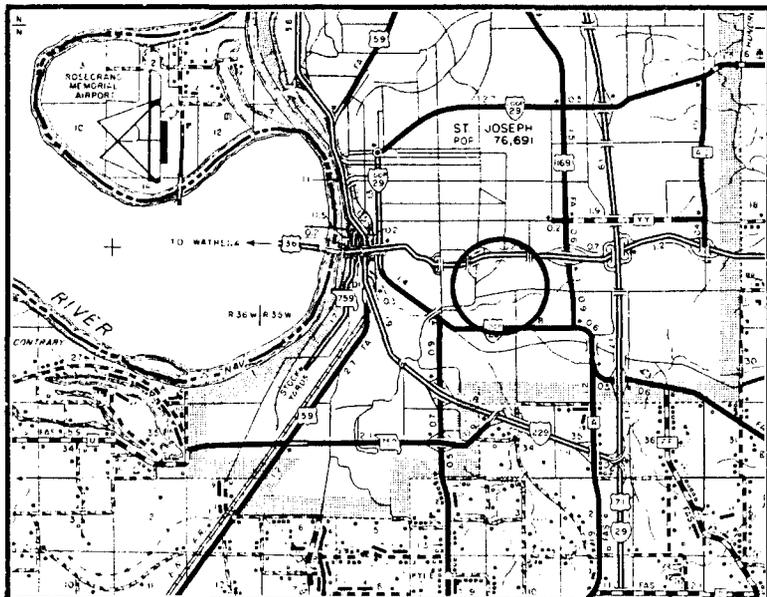
DATE

26 March 1992

NAME(S) OF STRUCTURE

Whitehead 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 386502.5; **Your Parks - How They Were Developed and How They Are Operated**, typewritten manuscript located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; **Special Ordinances Book 20**, located at the City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990; field inspection by Lon Johnson, 14 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Whitehead Creek Bridge
MHTD: 386502.5

BUCH42

DATE(S) OF CONSTRUCTION

1927

LOCATION

Brice Street over North Branch of Whitehead Creek; S22, T57N, R35W
St. Joseph; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

city street bridge / city street bridge

RATING NRHP possibly eligible (score: 46)

CONDITION

good

OWNER

City of St. Joseph

span number: 1	superstructure: concrete, two-rib, open spandrel arch
span length: 30.0'	substructure: concrete abutments and wingwalls; hammerhead spill-through piers
total length: 54.0'	floor/decking: concrete deck
roadway wdt.: 20.1'	other features: decorative wrought iron guardrails with paneled concrete bulkheads

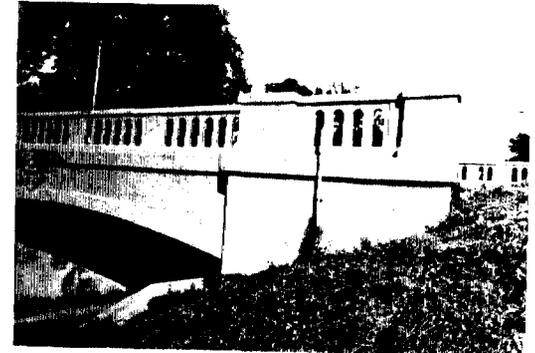
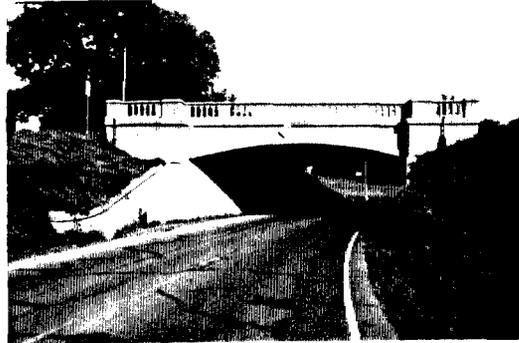
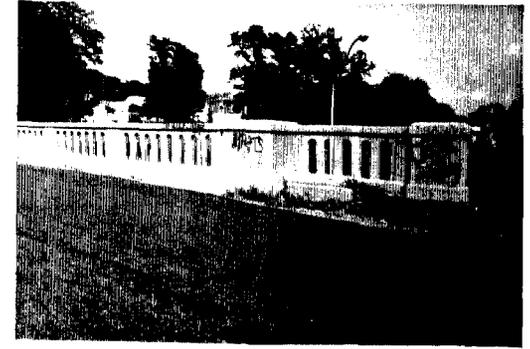
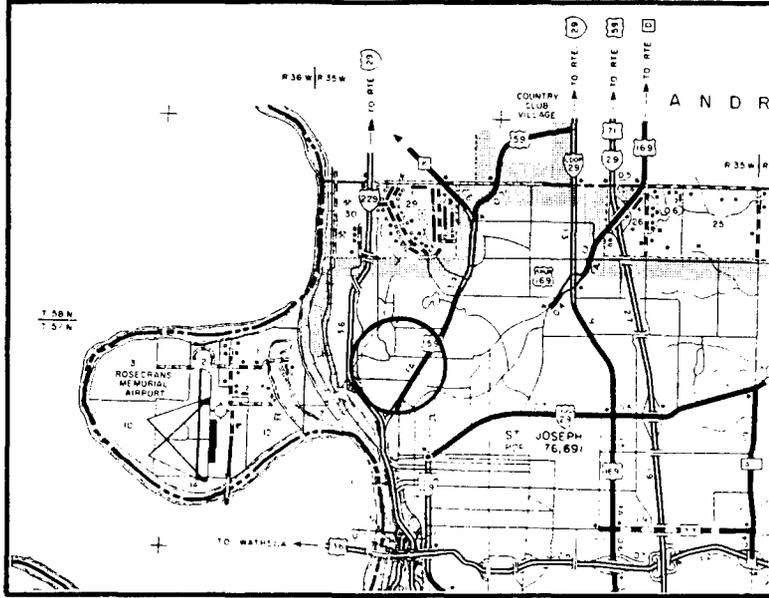
After World War I, the City of St. Joseph retained George Burnap, a landscape architect from Washington, D.C., to develop plans for an expansive urban park system. The voters gave approval to the plan, and by 1927 park areas had increased from 95 acres to almost 1200 acres. Bond issues in 1926 provided almost \$2 million for developing the park system, including an issue of \$763,000.00 for "paving, guttering, bridging, and tunneling the roadways through the park lands." This was one of two open spandrel concrete arch bridges constructed in the park system; both were located adjacent to the municipal golf course. W.A. Abrams of Unionville, Missouri, received the contract for both bridges. The shorter of the two, it presumably cost \$7892.00. The Whitehead Creek Bridge was completed in 1927 with the rest of the structures in this massive construction program.

This bridge is significant for its association with the expansive urban park system developed by the City of St. Joseph during the 1920s. The structure was one of two open spandrel arch bridges built to serve the areas adjacent to the municipal golf course. The bridge design provides an interesting contrast to the more substantial concrete bridges constructed to carry major city streets. The bridge is also significant as an outstanding example of urban park bridge design. The open concrete spandrels and thin metal balustrade provide a graceful appearance in an idyllic setting in the midst of the city.

NAME(S) OF STRUCTURE

Eleventh Street Underpass

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 386500.6; *Your Parks - How They Were Developed and How They Are Operated*, typewritten manuscript, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; Special Ordinances Book 20, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Eleventh Street Underpass
MHTD: 386500.6

BUCH37

DATE(S) OF CONSTRUCTION

1927

LOCATION

Eleventh Street over Maple Leaf Parkway (Corby Parkway); S5, T57N, R35W
St. Joseph; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP potentially eligible (score: 53)

CONDITION

good

OWNER

City of St. Joseph

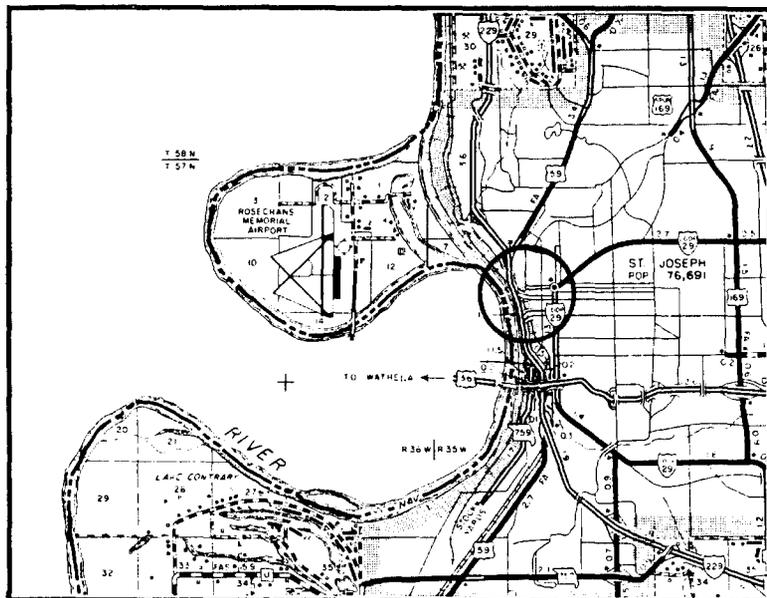
span number: 1	superstructure: concrete deck girder, skewed
span length: 42.0'	substructure: concrete abutments and wingwalls
total length: 45.0'	floor/decking: concrete deck
roadway wdt.: 36.0'	other features: concrete guardrails with slotted cutouts; arched spandrel girders with corbeled, faux arch rings

After World War I, the City of St. Joseph retained George Burnap, a landscape architect from Washington, D.C., to develop plans for an expansive urban park system. The voters gave approval to the plan, and by 1927 park areas had increased from 95 acres to almost 1200 acres. Bond issues in 1926 provided almost \$2 million for developing the park system, including an issue of \$763,000.00 for "paving, guttering, bridging, and tunneling the roadways through the park lands". The Olmstead Brothers of Brookline, Massachusetts, reviewed Burnap's plans prior to the start of construction; one major recommendation was to avoid grade on-crossings on important city streets. This street-to-street grade separation resulted from that recommendation. Built in 1927 as part of an extensive road and bridge construction effort, it typifies the small-scale, architecturally detailed overpasses built throughout the city at this time.

The Eleventh Street Underpass is significant for its association with the expansive urban park system developed by the City of St. Joseph during the 1920s. This was one of five underpasses built within twelve blocks of each other to carry major city streets over Corby Parkway. This may have been the first bridge constructed for the park system - its location is mentioned in June, 1926, and was not included with the other four underpasses constructed in 1927.

NAME(S) OF STRUCTURE
Great Western 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 386500.2; **Your Parks - How They Were Developed and How They Are Operated**, typewritten manuscript, located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; Special Ordinances Book 20 - located at City Clerk's Office, St. Joseph City Hall, St. Joseph MO; scrapbooks containing newspaper clippings of park-system development, located at Department of Parks and Recreation, Krug Park, St. Joseph MO; field inspection by Lon Johnson, 14 September 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Great Western Viaduct
MHTD: 386500.2

BUCH36

DATE(S) OF CONSTRUCTION

1927

LOCATION

Northwest Parkway over abandoned grade of Chicago and Great Western Railroad;
St. Joseph; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

S28, T58N, R35W railroad overpass / railroad overpass

RATING NRHP potentially eligible (score: 51)

CONDITION

good

OWNER

City of St. Joseph

span number: 3

superstructure: concrete, 6-rib deck girder

span length: 35.0'

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

total length: 108.0'

floor/decking: concrete deck

roadway wdt.: 30.0'

other features: concrete guardrails with square concrete balusters; arched haunches on spandrel girders; roadway cantilevered from spandrels on tapered concrete brackets; recessed panels on pier columns

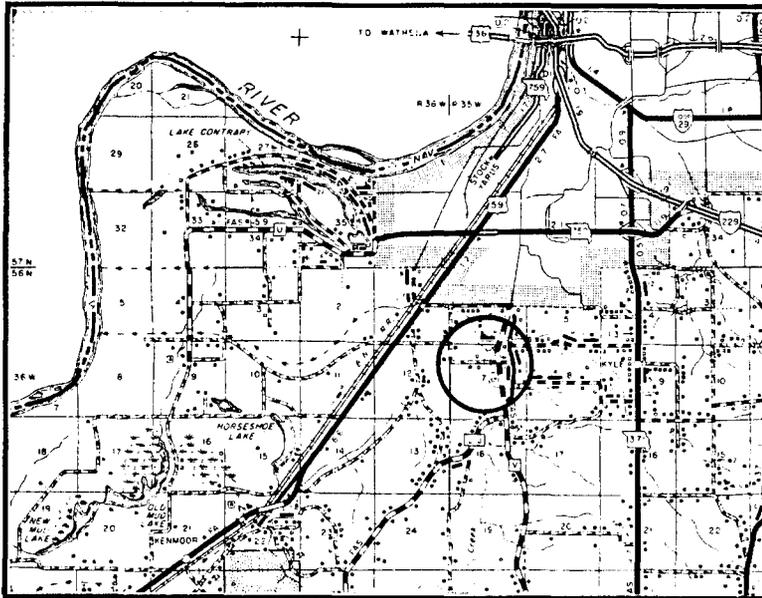
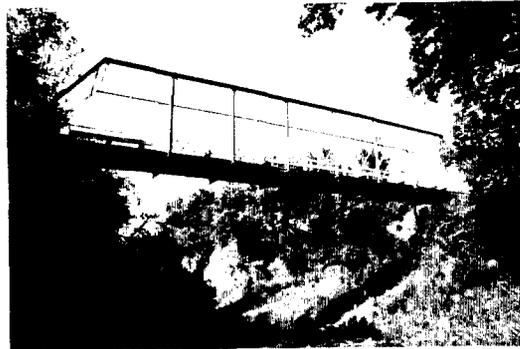
After World War I, the City of St. Joseph retained George Burnap, a landscape architect from Washington, D.C., to develop plans for an expansive urban-park system. The voters gave approval to Burnap's plan, and by 1927 park areas had increased from 95 acres to almost 1200 acres. Bond issues in 1926 provided almost \$2 million for developing the park system, including an issue of \$763,000.00 for "paving, guttering, bridging, and tunneling the roadways through the park lands." W.G. Fowler, a former draftsman for the State Highway Commission Bridge Department, was hired to design the park system's bridges. He began at once with the plans for this small-scale concrete viaduct across the Chicago - Great Western Railway tracks. Although the railway resisted paying its share of the construction costs, the Public Service Commission ordered it to pay half of the costs. Finally, in July 1927 the construction contract for the overpass was awarded to Carrother and Huggins Contractors for \$16,963.00. The St. Joseph-based builders apparently completed the structure later that year. The railroad tracks have since been removed, but the viaduct itself remains unaltered.

The Great Western Viaduct is significant for its association with the expansive urban park system developed by the City of St. Joseph during the 1920s. This was an important crossing, linking Krug Park in the northwest corner of the city with the remainder of the park system. The bridge is also significant as a representative example of urban park bridge design. The simple concrete deck girder bridge has been enhanced by the curve of the outside girders over the piers, the decorative capitals on the piers, and the cantilevered deck brackets.

NAME(S) OF STRUCTURE

Contrary 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 187001.4; Buchanan County Court Record, Book 20: page 205 (17 October 1888), located at the Buchanan County Courthouse, St. Joseph MO; field inspection by Lon Johnson, 7 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Contrary Creek Bridge
MHTD: 187001.4

BUCH26

DATE(S) OF CONSTRUCTION
1888 (possible)

LOCATION

County Road 187 over Contrary Creek; S7, T56N, R35W
1.0 mile south of St. Joseph; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 45)

CONDITION
fair

OWNER
Buchanan County

span number: 1
span length: 133.0'
total length: 135.0'
roadway wdt.: 14.0'

superstructure: wrought iron, 9-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments with timber back- and wingwalls
floor/decking: timber deck over timber stringers
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 double lacing (2 round eyerods at hip); diagonal: 2 square eyebars; counter: round rod with turnbuckle; strut: steel pipe; portal strut: lattice with decorative cast iron knee braces; lateral bracing: round rod; floor beam: tapered "fishtail" girder, U-bolted to lower chord pin; guardrail: timber

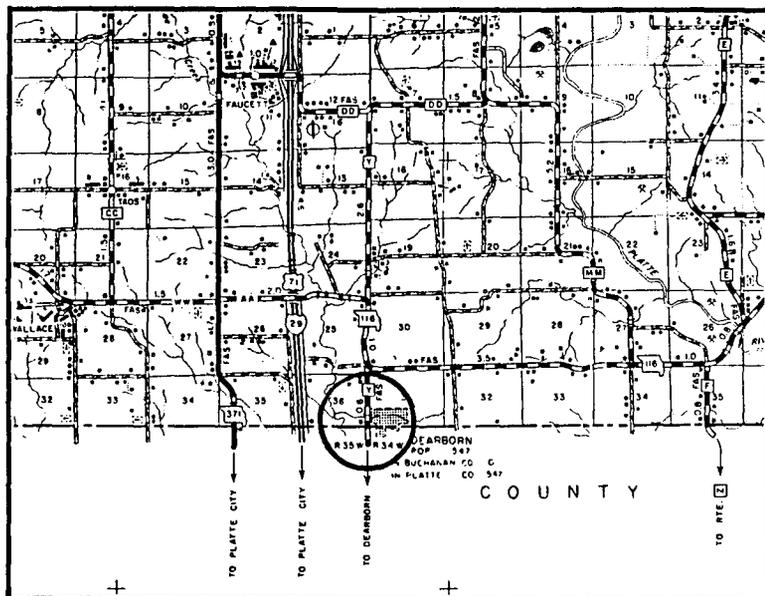
Spanning Contrary Creek just south of St. Joseph corporate limits, this medium-span through truss carries a gravel-surfaced county road in a rural Buchanan County setting. Design characteristics of the bridge itself - notably the tubular struts, double-laced verticals, cast iron knee braces and O-ringed lateral bracing - indicate that it was fabricated as a standard configuration by the Wrought Iron Bridge Company of Canton, Ohio. The truss has been evidently moved to this site and placed on steel pile bents (with the cylinder piers of an earlier bridge lying in the streambed). Its original location is unclear, however. In October 1888 Buchanan County contracted with WIBCo for a bridge across the Platte River at Agency. This may be that span, but county records do not corroborate this speculation. Although moved, the truss on the Contrary Creek Bridge remains structurally intact.

With its easy erection and extensive use of pre-fabricated standard components, the pin-connected Pratt through truss was the span of choice for all-iron bridges in the late 19th century. Industry giants such as the Wrought Iron Bridge Company and the King Iron Bridge and Manufacturing Company marketed Pratt trusses extensively through their national network of agents, and smaller, in-state contractors built Pratts extensively as well. As a result, pinned Pratt trusses constitute the largest group of through trusses in Missouri today. The Contrary Creek Bridge in Buchanan County is distinguished as an early example of iron truss construction, produced by the most prolific bridge fabricator in the country. Its physical integrity has been compromised somewhat by the subsequent move, but the truss itself remains in unaltered condition.

NAME(S) OF STRUCTURE

Brady 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 Y 10; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; **Third Biennial Report of the Missouri State Highway Commission, 1921-22, page 129.**

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brady Branch Bridge
MHTD: Y 10

BUCH09

DATE(S) OF CONSTRUCTION
1922

LOCATION

State Supplementary Route Y over branch of Bee Creek; S31/36, T55N, R34/35W
7.9 miles southwest of Agency; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 58)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 3
span length: 28.0'
total length: 97.0'
roadway wdt.: 18.2'

superstructure: concrete Luten arch
substructure: concrete abutments and wingwalls
floor/decking: concrete deck over earth fill
other features: roadway cantilevered on tapered brackets from arch spandrels; guardrails: cast concrete balusters with solid concrete bulkheads

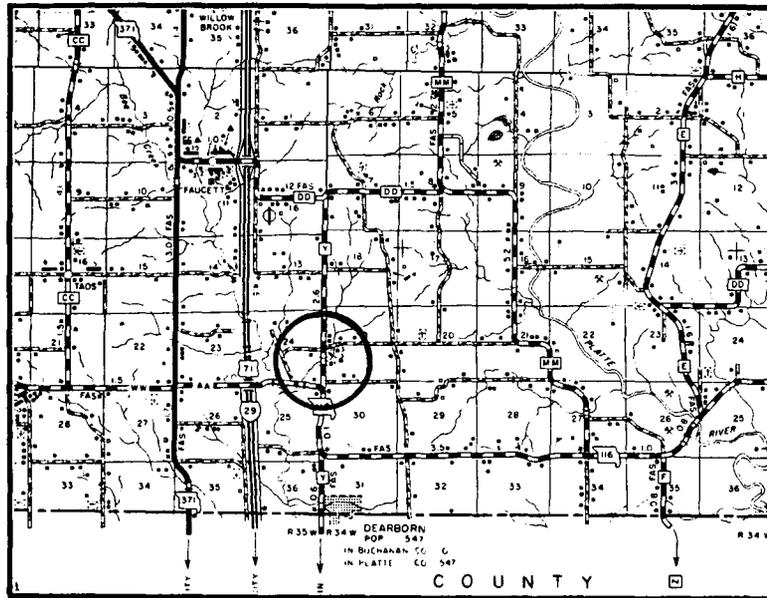
This small-scale concrete arch bridge spans the Brady Branch of Bee Creek southwest of Agency. Consisting of three filled spandrel arches supported by concrete abutments and piers, the structure carries State Supplementary Route Y in this rural Buchanan County location. The Missouri State Highway Department had originally designed an 18-foot concrete span for this minor crossing in 1921, and estimated its cost at \$14,289.00. Designating this bridge, two others and the adjacent stretch of State Highway 59 as Federal Aid Project 180, the department let the construction project out for competitive bids in October. When the bids were received, however, the Topeka Bridge and Construction Company proposed to build a structure of its own design here for almost four thousand dollars less. Topeka B&C's design consisted of three short-span concrete arches that used a patent held by Indianapolis engineer Daniel B. Luten. The arches featured a roadway cantilevered from the spandrel walls on tapered concrete brackets and concrete guardrails with cast, classically shaped balusters. The highway department opted for the alternate design and awarded the contract to Topeka B&C. The Kansas contractor began work on the three structures in March 1922, completing them later that year. Total cost of the Brady Branch Bridge: \$10,957.50. Since its completion, it has functioned in place without alteration.

Indianapolis engineer Daniel B. Luten patented his namesake concrete arch in 1905. Soon thereafter, he began marketing it on a national basis through his own construction company, and through regional representatives. The Topeka Bridge and Construction Company functioned as Luten's western representative, building Luten arches and other concrete bridges in the Midwest, the mountain states and as far away as Arizona. Although these bridges were marketed extensively and Luten protected his broadly defined patent rights aggressively through the courts, his arch designs never found universal acceptance. Relatively few Luten arches have been identified by the Missouri statewide bridge inventory. The Brady Branch Bridge, Bee Creek Bridge [BUCH08] and James Branch Bridge [BUCH15], designed and built by one of Daniel Luten's major subsidiaries, are all well-preserved, small-scale representatives of early patented concrete bridge design.

NAME(S) OF STRUCTURE

Bee 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 W 444; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Third Biennial Report of the Missouri State Highway Commission, 1921-22, page 129; field inspection by Lon Johnson, 14 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Bee Creek Bridge
MHTD: W 444

BUCH08

DATE(S) OF CONSTRUCTION

1922

LOCATION

State Supplementary Route Y over Bee Creek; S21/24, T55N, R34/35W
6.0 miles southwest of Agency; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 58)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 1

superstructure: concrete Luten arch

span length: 50.0'

substructure: concrete abutments and wingwalls

total length: 90.0'

floor/decking: concrete deck over earth fill

roadway wdt.: 18.0'

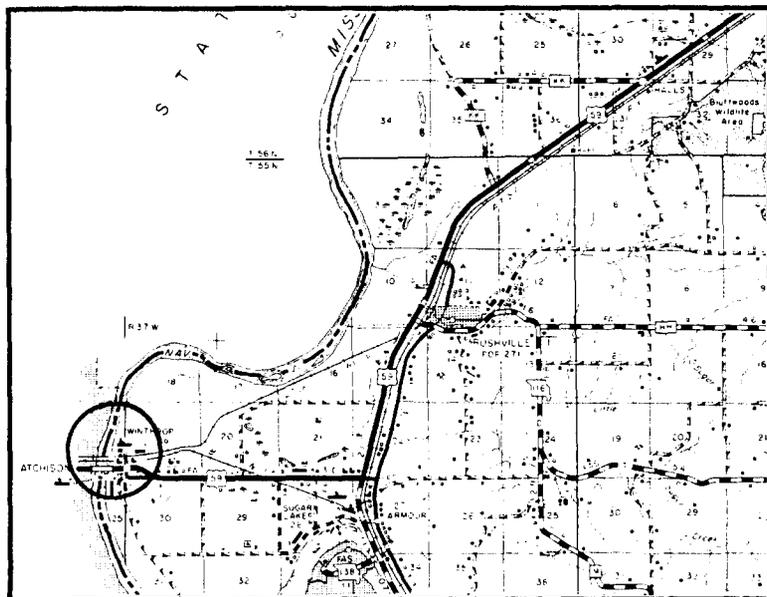
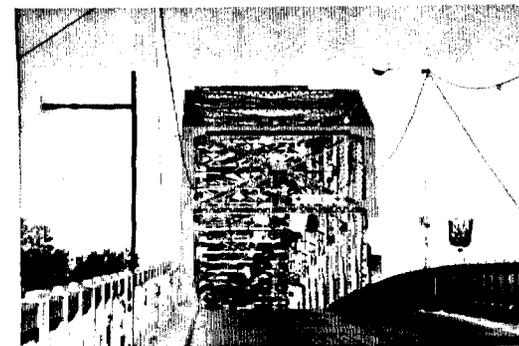
other features: roadway cantilevered on tapered brackets from arch spandrels; guardrails: cast concrete balusters with solid concrete bulkheads

This small-scale concrete arch bridge carries State Supplementary Route Y over Bee Creek southwest of Agency. The Missouri State Highway Department had originally designed a 20-foot concrete span for this minor crossing in 1921, and estimated its cost at \$7187.00. Designating this bridge, two others and the adjacent stretch of State Highway 59 as Federal Aid Project 180, the department let the construction project out for competitive bids in October. When the bids were received, however, the Topeka Bridge and Construction Company proposed to build a structure of its own design here for almost fifteen hundred dollars less. Topeka B&C's design consisted of a medium-span concrete arch that used a patent held by Indianapolis engineer Daniel B. Luten. The arch featured a roadway cantilevered from the spandrel walls on tapered concrete brackets and concrete guardrails with cast, classically shaped balusters. The highway department opted for the alternate design and awarded the contract to Topeka B&C. The Kansas contractor began work on the three structures in March 1922, completing them later that year. Total cost of the Bee Creek Bridge was \$12,478.00. Since its completion, it has functioned in place without alteration.

Indianapolis engineer Daniel B. Luten patented his namesake concrete arch in 1905. Soon thereafter, he began marketing it on a national basis through his own construction company, and through regional representatives. The Topeka Bridge and Construction Company functioned as Luten's western representative, building Luten arches and other concrete bridges in the Midwest, the mountain states and as far away as Arizona. Although these bridges were marketed extensively and Luten protected his broadly defined patent rights aggressively through the courts, his arch designs never found universal acceptance. Relatively few Luten arches have been identified by the Missouri statewide bridge inventory. The Bee Creek Bridge, Brady Branch Bridge [BUCH09] and James Branch Bridge [BUCH15], designed and built by one of Daniel Luten's major subsidiaries, are all well-preserved, small-scale representatives of early patented concrete bridge design.

NAME(S) OF STRUCTURE

Atchison 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 697R; Files on primary system bridges located at the Missouri Highway and Transportation Department, Jefferson City MO; "Free Bridge at Atchison Now in Use," St. Joseph News-Press, 3 July 1938; Eleventh Biennial Report of the State Highway Commission of Missouri for the Period Ending December Thirty-first 1938, pp. 168 and 170; "Z.E. Jackson Led Nine-Year Battle to Obtain Bridge," St. Joseph News-Press, 17 September 1938; J.A.L. Waddell, De Pontibus: A Pocket-Book for Bridge Engineers (New York: John Wiley & Sons, 1898); field inspection by Lon Johnson, 14 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

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DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Atchison Bridge
MHTD: K 697R

BUCH05

DATE(S) OF CONSTRUCTION

1937-38

LOCATION

U.S. Highway 59 over Missouri River; S19, T55N, R37W
Winthrop MO / Atchison KS; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP eligible (score: 61)

CONDITION

excellent

OWNER

Missouri Highway and Transportation Department

span number: 2
span length: 474.0'
total length: 1339.0'
roadway wdt.: 24.0'

superstructure: steel, 11-panel, rigid-connected cantilever through truss with 2, 7-panel, rigid-connected Warren deck trusses at each end; 3 steel stringer and 3 steel girder approach spans at west end; 4 steel stringer approach spans at east end
substructure: concrete abutments, wingwalls and piers
floor/decking: grating covered by corrugated steel and asphalt over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing or 4 built-up angles with cover and batten plates or 2 channels with double lacing; lower chord: 4 built-up angles with lacing and batten plates; vertical: 4 angles with batten plate or 2 channels with lacing or 4 built-up angles with double lacing or 2 channels with batten plates; hip vertical: 4 built up angles with lacing; diagonal: 4 angles with batten plates or 4 built up angles with lacing or 2 channels with batten plates or 4 built-up angles with batten plates; lateral bracing: 2 angles with lacing at top; 2 angles at bottom; strut: 2 angles with lacing; floor beam: I-beams; guardrail: steel balustrade

Located between Winthrop, MO and Atchison, KS, this bridge carries U.S. Highway 59 over the Missouri River north of Kansas City. Although they already had a crossing at St. Joseph, the residents of Buchanan County had since 1892 eagerly worked toward a bridge at Winthrop (also known as East Atchison) in Rush Township. In the middle 1930s their efforts sped toward fruition. The Missouri Highway Commission's Bureau of Bridges designed the new bridge, funded as Federal Aid Project 714, as a multiple-span steel truss structure. Finishing the design in early 1936, the Bureau solicited bids for the bridge's construction. On May 7 the Bushman Construction Company received the first contract, \$25,580 for the substructure of the east approach spans. Several other contracts were required to complete the remainder of the bridge: Missouri Valley Bridge and Iron Company (MoVB&I), \$12,493.20 for the pier fenders; Oscar H. Schmidt, \$52,000 for the superstructures on the approach spans; and MoVB&I and Kansas City Bridge Company, \$249,275 for the concrete piers supporting the cantilever spans.

On February 8, 1937 Wisconsin Bridge and Iron Company (WB&I) bid \$304,826.90 on construction of the main span superstructure, receiving the contract. WB&I soon began work on the eleven-span superstructure, including the three-span I-beam cantilever section (spans of 415, 474, 415 feet). After nearly a year of arduous labor, WB&I completed the bridge in late June 1938. The Atchison Bridge

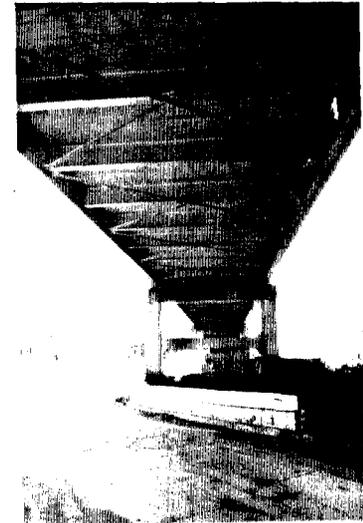
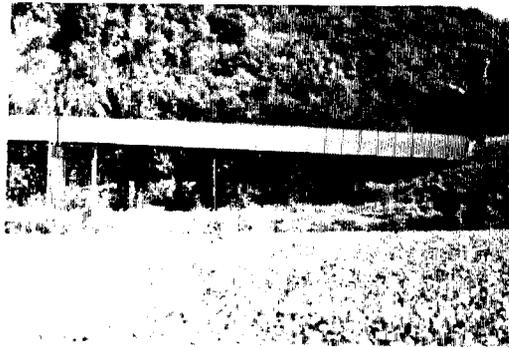
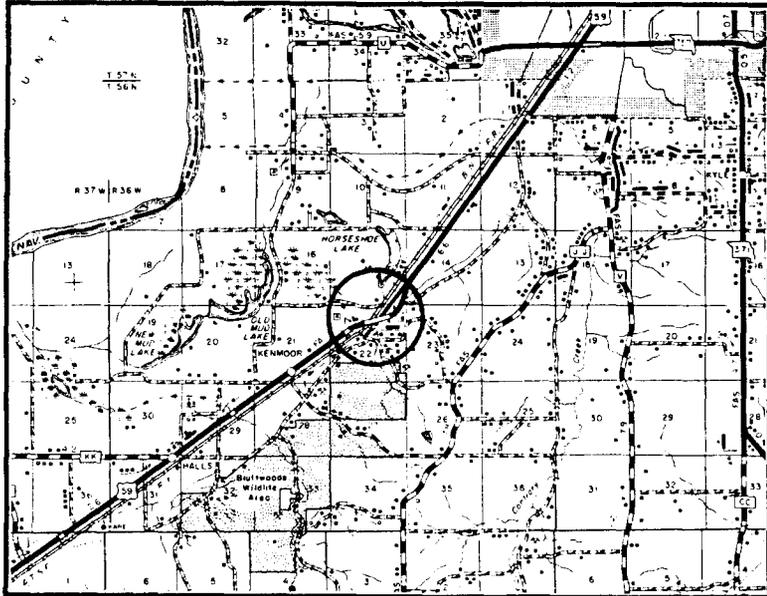
was opened and dedicated with "none too formal ceremonies" on July 2. A long automobile caravan carrying dignitaries from Atchison crossed the bridge from the western side. Within an hour, over 1,500 cars drove across the new Missouri River Bridge. Since its completion, the only alteration has been the application of paint in early 1990.

Many of Missouri's important crossings included variations on steel superstructures with concrete substructures. Cantilevers, steel I-bar, I-beams, trusses, rigid-space-frames, concrete deck girders, and arches were prominent designs. Although some cantilevers were built in the 1920s, they became more popular in the 1930s, accommodating some of the state's larger-scale structures. Cantilevering, popular among state bridge designers during the 1930s and '40s, found little support among prominent engineers of the time. J.A.L. Waddell, noted bridge engineer, condemned the design as "always inferior in rigidity to bridges of simple truss spans, and . . . always more expensive. The Atchison Bridge's \$669,838.96 price tag supports Waddell's criticism. Its design, however, placed the Atchison Bridge in the milieu of Missouri River bridge construction.

NAME(S) OF STRUCTURE

U.S. Highway 59 Overpass

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 590; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Tenth Biennial Report of the State Highway Commission of Missouri, 1935-36, pages 55-56, 263; field inspection by Lon Johnson, 7 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

26 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

U.S. Highway 59 Overpass
MHTD: K 590

BUCH03

DATE(S) OF CONSTRUCTION

1936-37

LOCATION

U.S Highway 59 over Burlington and Rock Island Railroads; S15/22, T56N, R36W highway overpass / highway overpass
1.5 miles northeast of Kenmoor; Buchanan County, Missouri

USE (ORIGINAL / CURRENT)

RATING NRHP possibly eligible (score: 60)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 5; 1; 1
span length: 115';100';80'
total length: 770.0'
roadway wdt.: 24.0'

superstructure: steel plate through girder with continuous ends
substructure: concrete abutments, wingwalls and spill-through piers
floor/decking: concrete deck over steel stringers
other features: girder: steel plate with 2-angle flanges, top and bottom, and cover plate; stringer: I-beam; bottom lateral bracing: angle; bridge plate: **MISSOURI HIGHWAY DEPT BRIDGE No K-590 1936**

This multiple-span overpass carries U.S. Highway 59 over the tracks of the Burlington and Rock Island railroads at a rural crossing northeast of Kenmoor. The structure consists of a series of seven long-span, riveted plate through girders (five with 115-foot spans, one with 100-foot and one with 80-foot), supported by spill-through concrete piers. The overpass was engineered by the Missouri State Highway Commission Bureau of Bridges early in 1936. Designating the project as WPGH-49-2, the agency solicited competitive proposals in May. A month later the state highway commission awarded a construction contract to Sandy Hites. Hites' crew completed the structure the following year for \$113,402.60; since that time the overpass has functioned in place without alteration.

"The past two years have been spent in completing the separation projects on the National Recovery Act Program," the state highway commission reported in 1936, "and in instituting a program under the Works Progress Administration grants to this State for grade separation purposes. Under the NRA grant, which amounted to \$6,173,740, forty grade separations were built in connection with other road work... Under the WPA appropriation, contracts have been let for 39 separations, with two others ready for letting." The Buchanan County crossing constituted a part of this massive construction effort. With its five spans, the longest of which extends 115 feet, it is distinguished as one of the longest plate girder structures on Missouri's primary road system. The U.S. Highway 59 Overpass is thus historically significant for its representation of an important statewide construction trend and technologically significant as a well-preserved, long-span example of MSHD beam design.