CLAY COUNTY

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

Inv. No.	MHTD	Bridge Name	Description	
CLAY01	K 108A	Fishing River Bridge	**3-100'**	riveted Warren pony truss
			1933	Davis Construction Company
CLAY02	K 647	Fishing River Bridge	**1-100'**	steel deck girder
			1936	Otto W. Knutson
*CLAY03	N111B21	Shoal Creek Bridge	1- 55'	**concrete filled spandrel arch**
			1921	Phillips Contracting Company
CLAY04	N133B21	Small Creek Bridge		(replaced)
CLAY05	N149B41	Big Shoal Creek Bridge		(replaced)
*CLAY06	N213B31	Fishing River Bridge	1- 38'	pinned Pratt half-hip pony truss
			1912	Kansas City Bridge Company
CLAY07	S 818	Clear Creek Bridge	**1-100'**	riveted Warren pony truss
			1933	Otto W. Knutson
*CLAY08	S007B12	Chouteau Bridge	3-404'	**pinned Whipple through truss**
			1887	Keystone Bridge Works
*CLAY09	U1370131	Wildwood Avenue Overpass	1- 31'	concrete deck girder
			1907	
*CLAY10	046000.4	Clear Creek Bridge	1-100'	**2-angle Camelback pony truss**
			c1940	
*CLAY11	049001.6	New Hope Creek Bridge	2- 43'	**concrete Luten arch**
			1919	Topeka Bridge and Iron Co.
*CLAY12	070002.1	Carroll Creek Bridge	1- 42'	**concrete filled spandrel arch**
			1920	Phillips Contracting Company
CLAY13	137000.1	North Thompson Ave. Bridge		(replaced)
CLAY14	137000.2	South Thompson Ave. Bridge		(replaced)
*CLAY15	137000.5	Marietta Street Bridge	1- 72'	**concrete open spandrel arch**
			c1920	
*CLAY16	137000.6	Garland Street Bridge	1- 68'	**concrete open spandrel arch**
			1917	Western Bridge Company
*CLAY17	153001.3	Wilkerson Creek Bridge	1- 60'	**concrete Luten arch**
			1921	Topeka Bridge and Constr. Co.
*CLAY18	247500.1	Richfield Street Overpass		(replaced)
CLAY19	247500.7	Campbell Drive Bridge	1- 40'	**concrete filled spandrel arch**
			1921	
CLAY20	247500.9	Rush Creek Bridge	1- 26'	**concrete filled spandrel arch**
			c1920	
CLAY21	293000.3	Fishing River Bridge	1- 70'	riveted Pratt pony truss
			1916	Kansas City Bridge Co. (prob.)
*CLAY22	354000.2	Williams Creek Bridge	2- 48'	**concrete Luten arch**
			1920	Topeka Bridge and Iron Co.

EXCLUDED:

Warren pony truss
H 661

CLAY COUNTY

EXCLUDED (cont.):

Other truss

N034B21	N067831	050000.3	059000.0	068000.3	101000.7	104000.4
107000.9	110000.6	118000.5	126000.7	206001.0	208000.6	210000.9
N063B12						

Steel stringer

A00000.8	J 205R	J 635R	K 460R	K 461R	K 648	K 881
L 191A	N024B22	N024B31	N039B41	N138B11	N174B31	N183B41
N212B41	N242B11	S 369	S 748	S 781	S 819	W 388
006000.4	020001.4	020001.5	057000.2	062000.8	064000.2	096001.3
112003.5	145001.8	158000.3	165000.1	184001.3	188000.4	196000.4
215001.8	219000.1	226000.9				

Steel girder
184001.0

Steel multi-plate arch
056000.6

Concrete girder

H 938	J 503	J 923	K 140R	K 292	K 307R	K 363RK 369
069000.3	085500.1	085500.2				

Concrete slab
N212B31 N06B31

Concrete box culvert

H 660	H 940	K 106	K 368	K 564	K 645	L 190
S 486	U1370132	020000.2	100000.7	132000.6	171001.7	171003.5
247500.3						

Timber stringer

N061B31	W 288	067001.9	359300.1	359300.2

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	3	10	4	0	17
Excluded	23	62	12	0	97
	26	72	16	0	114 structures

Fishing River Bridge

CLAY01

GENERAL DATA

structure no.: K 108A
county: Clay

city/town: 5.5 miles southwest of Excelsior Springs
feature inters.: Fishing River
cadastral grid: S18, T52N, R30W
highway route: U.S. Highway 69
highway distr.: 4
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected Warren pony truss
substructure: concrete abutments, wingwalls and piers

span number: 3
span length: 100.0'
total length: 309.0'
roadway width: 34.0'

condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1933
erection cost: $43,762.99
designer: Missouri State Highway Department
fabricator : unknown
contractor: Davis Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 108A; Files on Primary System Bridges on file at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 46
evaluation: NRHP non-eligible (typically configured example of MSHD standard truss design)

inventoried by: Clayton B. Fraser 10 September 1994

Fishing River Bridge

CLAY02

GENERAL DATA

structure no.: K 647
county: Clay

city/town: 5.0 miles south of Excelsior Springs
feature inters.: Fishing River
cadastral grid: S36, T52N, R30W
highway route: State Supplementary Route N
highway distr.: 4
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel plate deck girder, with seven steel stringer approach spans
substructure: timber pile abutments and piers with concrete caps

span number: 1
span length: 100.0'
total length: 434.0'
roadway width: 22.0'

condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1936
erection cost: $35,381.00
designer: Missouri State Highway Department
fabricator : unknown
contractor: Otto W. Knutson

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 647; Files on Primary System Bridges on file at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 38
evaluation: NRHP non-eligible (typically configured example of MSHD beam bridge design)

inventoried by: Clayton B. Fraser 10 September 1994

Shoal Creek Bridge

CLAY03

GENERAL DATA

structure no.: N111B21
county: Clay

city/town: Gladstone
feature inters.: Shoal Creek
cadastral grid: S18, T51N, R32W
highway route: North Agnes Avenue
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

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

span number: 1
span length: 55.0'
total length: 55.0'
roadway width: 18.0'

condition: fair
alterations: none
floor/decking : concrete over earth fill
other features: concrete guardrails with recessed rectangular panels

HISTORICAL DATA

erection date: 1920-21
erection cost: $7295.00 (contract amount)
designer: unknown
fabricator : none
contractor: Phillips Contracting Company, Buckner MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number N111B21; Clay County Court Record, Book 28: page 285 (19 April 1920), page 362 (14 June 1920) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 49
evaluation: NRHP possibly eligible (well-preserved example of non-standard concrete bridge construction)

inventoried by: Clayton B. Fraser 10 September 1994

Fishing River Bridge

CLAY06

GENERAL DATA

structure no.: N213B31
county: Clay

city/town: northeastern edge of Kansas City
feature inters.: Fishing River
cadastral grid: S23/24, T52N, R32W
highway route: North Home Avenue
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

superstructure: steel, 2-panel, pin-connected Pratt half-hip pony truss
substructure: concrete abutments, wingwalls and open-concrete piers

span number: 1
span length: 38.0'
total length: 73.0'
roadway width: 13.5'

condition: fair
alterations: bridge closed
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 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 square eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: 2 angles with lacing

HISTORICAL DATA

erection date: 1912
erection cost: $700.00 (superstructure cost)
designer: Kansas City Bridge Company, Kansas City MO
fabricator : Kansas City Bridge Company, Kansas City MO
contractor: Kansas City Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number N213B31; Clay County Court Record, Book W: page 382 (27 May 1912) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 39
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 10 September 1994

Clear Creek Bridge

CLAY07

GENERAL DATA

structure no.: S 818
county: Clay

city/town: 1.0 mile southeast of Kearney
feature inters.: Clear Creek
cadastral grid: S26/35, T52/53N, 31RW
highway route: State Highway 92
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Warren pony truss
substructure: timber pile bent abutments and piers with concrete caps

span number: 1
span length: 100.0'
total length: 212.0'
roadway width: 20.0'

condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1933-34
erection cost: $13,934.25
designer: Missouri State Highway Department
fabricator : unknown
contractor: Otto W. Knutson

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number S 818; Files on Primary System Bridges on file at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 43
evaluation: NRHP non-eligible (typically configured example of MSHD standard truss design)

inventoried by: Clayton B. Fraser 10 September 1994

Chouteau Bridge

CLAY08

GENERAL DATA

structure no.: S007B12
county: Clay
city/town: Kansas City
feature inters.: Missouri River
cadastral grid: S18, T50N, R32W
highway route: Chouteau Drive
highway distr.: 4
current owner: Clay County / Jackson County

STRUCTURAL DATA

superstructure: steel, 16-panel, pin-connected Whipple through truss channel spans; 32 plate girder approach spans; 2 steel stringer approach spans on south end; 3 steel stringer approach spans on north end

substructure: concrete abutments with stone masonry channel piers and steel bent approach span piers

span number: 3
span length: 404.0'
total length: 1359.0'
roadway width: 20.0'
condition: fair
alterations: converted from railroad to vehicular use
floor/decking : concrete over steel bridge deck
other features: upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 4 angles with lacing or 4 punched rectangular eyebars; vertical: 2 built-up channels with lacing (2 punched rectangular eyebars at hips); diagonal: punched rectangular eyebars; upper lateral bracing: round rod; lower lateral bracing: 1 angle; floor beam: riveted plate girder

HISTORICAL DATA

erection date: 1886-87
erection cost: unknown
designer: Charles Louis Strobel, Chicago IL
fabricator : Keystone Bridge Works, Pittsburgh PA
contractor: Keystone Bridge Works, Pittsburgh PA (superstructure); Sooy Smith and Company, New York NY (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number S007B12; Historical American Engineering Record prepared by Harrington & Cortelyou, Inc., Kansas City MO, 1991; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 97
evaluation: NRHP eligible (The last of the pinned Whipple trusses over the Missouri River, the Chouteau Bridge is a nationally significant example of great river bridge construction.)

inventoried by: Clayton B. Fraser 10 September 1994

Wildwood Avenue Overpass

CLAY09

GENERAL DATA

structure no.:	U1370131	city/town:	Excelsior Springs
county:	Clay	feature inters.:	Henrie Avenue
		cadastral grid:	S1, T52N, R30W
		highway route:	Wildwood Avenue
		highway distr.:	4
		current owner:	Clay County

STRUCTURAL DATA

superstructure: concrete deck girder with arched haunches
substructure: concrete abutments; stone and concrete wingwalls

span number:	1	condition:	fair
span length:	31.0'	alterations:	bridge widened and guardrails replaced
total length:	38.0'	floor/decking :	concrete deck
roadway width:	22.5'	other features:	slotted concrete guardrails

HISTORICAL DATA

erection date: 1907
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number U1370131; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 29
evaluation: NRHP non-eligible (earliest example in state of concrete girder construction, poorly documented and substantially altered)

inventoried by: Clayton B. Fraser 10 September 1994

Clear Creek Bridge

CLAY10

GENERAL DATA

structure no.: 046000.4
county: Clay

city/town: 4.6 miles northwest of Kearney
feature inters.: Clear Creek
cadastral grid: S5, T53N, R31W
highway route: County Road 46
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

superstructure: steel, rigid-connected 2-angle Camelback pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 100.0'
total length: 102.0'
roadway width: 17.4'

condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: upper chord and inclined end post: 2 angles with cover plate; lower chord, vertical and diagonal: 2 angles; lateral bracing: round rod with threaded ends; strut: steel plate knee brace at vertical; floor beam: I-beam; guard-rail: 2 angles

HISTORICAL DATA

erection date: c1940
erection cost: unknown
designer: unknown
fabricator : Illinois Steel Company, Chicago IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 046000.4; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 37
evaluation: NRHP non-eligible (uncommon structural type, poorly documented)

inventoried by: Clayton B. Fraser 10 September 1994

New Hope Creek Bridge

CLAY11

GENERAL DATA

structure no.: 049001.6
county: Clay

city/town: 2.9 miles northeast of Kearney
feature inters.: New Hope Creek
cadastral grid: S14, T53N, R31W
highway route: County Road 49
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

superstructure: concrete Luten arch
substructure: concrete abutments, wingwalls and pier

span number: 2
span length: 43.0'
total length: 103.0'
roadway width: 15.8'

condition: fair
alterations: none
floor/decking : earth fill over concrete
other features: concrete guardrails with incised rectangular panels; builder's plate: **BUILT BY THE / TOPEKA / BRIDGE & IRON CO. / TOPEKA KANSAS / 1919**

HISTORICAL DATA

erection date: 1919
erection cost: $5965.00
designer: Daniel B. Luten, Indianapolis IN (patent-holder)
fabricator : none
contractor: Topeka Bridge and Iron Company, Topeka KS

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 049001.6; Clay County Court Record, Book 27: page 494 (3 April 1919), page 521 (5 May 1919) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 64
evaluation: NRHP possibly eligible (well-preserved example of patented concrete bridge type)

inventoried by: Clayton B. Fraser 10 September 1994

Carroll Creek Bridge

CLAY12

GENERAL DATA

structure no.: 070002.1
county: Clay

city/town: 5.1 miles northeast of Kearney
feature inters.: branch of Carroll Creek
cadastral grid: S8, T53N, R30W
highway route: County Road 70
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

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

span number: 1
span length: 42.0'
total length: 45.0'
roadway width: 18.0'

condition: fair
alterations: none
floor/decking : earth fill over concrete
other features: concrete guardrails with recessed rectangular panels

HISTORICAL DATA

erection date: 1920-21
erection cost: $6980.00 (contract amount)
designer: unknown
fabricator : none
contractor: Phillips Contracting Company, Buckner MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 070002.1; Clay County Court Record, Book 28: page 285 (19 April 1920), page 362 (14 June 1920) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 49
evaluation: NRHP possibly eligible (well-preserved example of non-standard concrete bridge construction)

inventoried by: Clayton B. Fraser 10 September 1994

Marietta Street Bridge

CLAY15

GENERAL DATA

structure no.: 137000.5
county: Clay

city/town: Excelsior Springs
feature inters.: East Fork of Fishing River
cadastral grid: S1, T52N, R30W
highway route: Marietta Street
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

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

span number: 1
span length: 72.0'
total length: 116.0'
roadway width: 22.5'

condition: good
alterations: none
floor/decking : concrete deck
other features: concrete Art Deco post-and-slab guardrails with diamond cutouts; cantilevered sidewalks

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 137000.5; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 31
evaluation: NRHP non-eligible (nicely detailed, but poorly documented, example of pre-MSHD concrete bridge design)

inventoried by: Clayton B. Fraser 10 September 1994

Garland Street Bridge

CLAY16

GENERAL DATA

structure no.: 137000.6
county: Clay
city/town: Excelsior Springs
feature inters.: Dry Fork of Fishing River
cadastral grid: S12, T52N, R30W
highway route: Garland Street
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

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

span number: 1
span length: 68.0'
total length: 99.0'
roadway width: 22.0'
condition: fair
alterations: none
floor/decking : concrete deck
other features: slotted concrete guardrails; builder's plate: WESTERN BRIDGE CO. / HARRISONVILLE MO / 1917 / W.C. PATTON / CITY ENGINEER

HISTORICAL DATA

erection date: 1917
erection cost: unknown
designer: W.C. Patton, City Engineer
fabricator : none
contractor: Western Bridge Company, Harrisonville MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 137000.6; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 52
evaluation: NRHP possibly eligible (early, well-preserved example of pre-MSHD open spandrel concrete arch design)

inventoried by: Clayton B. Fraser 10 September 1994

Wilkerson Creek Bridge

CLAY17

GENERAL DATA

structure no.: 153001.3
county: Clay

city/town: 1.7 miles southeast of Smithville
feature inters.: Wilkerson Creek
cadastral grid: S25, T53N, R33W
highway route: County Road 153
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

superstructure: concrete Luten arch
substructure: concrete abutments and wingwalls

span number: 1
span length: 60.0'
total length: 104.0'
roadway width: 19.0'

condition: fair
alterations: none
floor/decking : cantilevered concrete
other features: limestone, ashlar rubble facing; 5-panel classical balustrade guardrails

HISTORICAL DATA

erection date: 1921
erection cost: $10,904.00
designer: Daniel B. Luten, Indianapolis IN (patent-holder)
fabricator : none
contractor: Topeka Bridge and Construction Company, Topeka KS

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 153001.3; Clay County Court Record, Book 29: page 366 (12 August 1921), pages 412-419 (no date) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 62
evaluation: NRHP possibly eligible (well-preserved example of patented concrete bridge type)

inventoried by: Clayton B. Fraser 10 September 1994

Campbell Drive Bridge

CLAY19

GENERAL DATA

structure no.: 247500.7
county: Clay

city/town: Glenaire
feature inters.: Shoal Creek
cadastral grid: S24, T51N, R32W
highway route: Campbell Drive
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

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

span number: 1
span length: 40.0'
total length: 60.0'
roadway width: 19.0'

condition: fair
alterations: unknown
floor/decking : earth fill over concrete
other features: unknown

HISTORICAL DATA

erection date: 1921
erection cost: unknown
designer: unknown
fabricator : none
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 247500.7.

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

inventoried by: Clayton B. Fraser 10 September 1994

Rush Creek Bridge

CLAY20

GENERAL DATA

structure no.:	247500.9	city/town:	Liberty
county:	Clay	feature inters.:	Rush Creek
		cadastral grid:	S9, T51N, R32W
		highway route:	Reyfield
		highway distr.:	4
		current owner:	Clay County

STRUCTURAL DATA

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

span number:	1	condition:	fair
span length:	26.0'	alterations:	unknown
total length:	27.0'	floor/decking :	earth fill over concrete
roadway width:	33.3'	other features:	unknown

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 247500.9.

sign. rating: 21
evaluation: NRHP non-eligible (small-scale example of concrete arch construction, poorly documented)

inventoried by: Clayton B. Fraser 10 September 1994

Fishing River Bridge

CLAY21

GENERAL DATA

structure no.:	293000.3	**city/town:**	western edge of Mosby
county:	Clay	**feature inters.:**	Fishing River
		cadastral grid:	S18, T52N, R30W
		highway route:	County Road 293
		highway distr.:	4
		current owner:	Clay County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: unknown

span number:	1	**condition:**	fair
span length:	70.0'	**alterations:**	unknown
total length:	70.0'	**floor/decking :**	concrete deck over steel stringers
roadway width:	14.0'	**other features:**	steel lattice guardrails

HISTORICAL DATA

erection date: 1916
erection cost: unknown
designer: Kansas City Bridge Company, Kansas City MO (probable)
fabricator : Kansas City Bridge Company, Kansas City MO (probable)
contractor: Kansas City Bridge Company, Kansas City MO (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 293000.3; Clay County Court Record, Book Z: page 66 (13 March 1916) - located at the Clay County Courthouse, Liberty MO.

sign. rating: 42
evaluation: NRHP non-eligible (typically configured, partially documented example of common structural type)

inventoried by: Clayton B. Fraser 10 September 1994

Williams Creek Bridge

CLAY22

GENERAL DATA

structure no.: 354000.2
county: Clay
city/town: Mosby
feature inters.: Williams Creek
cadastral grid: S16, T52N, R30W
highway route: County Road 354
highway distr.: 4
current owner: Clay County

STRUCTURAL DATA

superstructure: concrete Luten arch
substructure: concrete abutments, wingwalls and pier

span number: 2
span length: 48.0'
total length: 119.0'
roadway width: 18.1'
condition: fair
alterations: guardrail damaged
floor/decking : earth over concrete fill
other features: bullnosed cutwaters in pier; concrete guardrails with classical cast balusters

HISTORICAL DATA

erection date: 1919-20
erection cost: $11,700.00 (contract amount)
designer: Daniel B. Luten, Indianapolis IN (patent-holder)
fabricator : none
contractor: Topeka Bridge and Iron Company, Topeka KS

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 354000.2; Clay County Court Record, Book 27: page 613 (7 August 1919); Book 28: page 37 (23 October 1919), page 399 (30 July 1920) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

sign. rating: 54
evaluation: NRHP possibly eligible (representative example of patented concrete bridge design, damaged)

inventoried by: Clayton B. Fraser 10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Shoal Creek Bridge
MHTD: N111B21

CLAY03

DATE(S) OF CONSTRUCTION
1920-21

LOCATION
North Agnes Avenue over Shoal Creek; S18, T51N, R32W
Gladstone; Clay County, Missouri

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP possibly eligible (score: 49)

CONDITION
fair

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	55.0'	substructure:	concrete abutments and wingwalls
total length:	55.0'	floor/decking:	concrete over earth fill
roadway wdt.:	18.0'	other features:	concrete guardrails with recessed rectangular panels

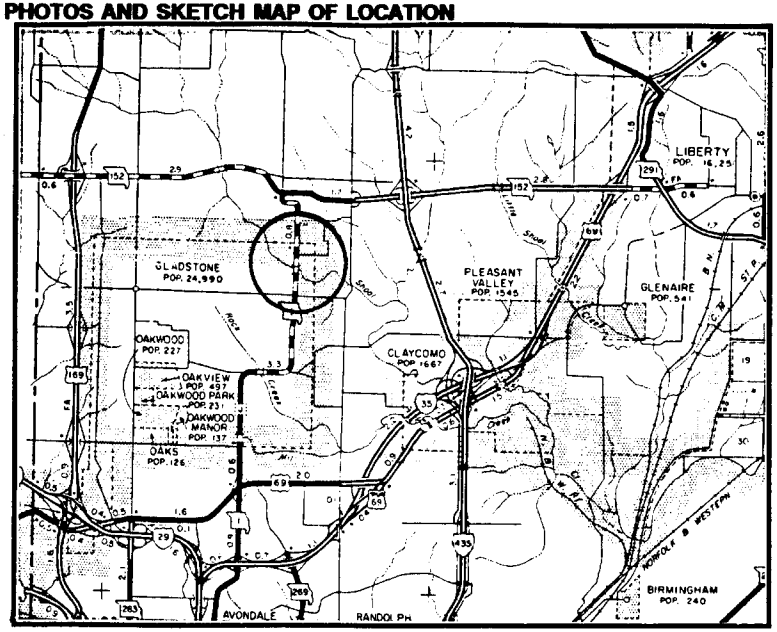
This medium-scale concrete arch bridge carries North Agnes Avenue over Shoal Creek in Gladstone. The structure consists of a single filled spandrel arch on concrete abutments, featuring plainly detailed concrete guardrails with recessed rectangular panels. The Shoal Creek Bridge dates to 1920. In April of that year the Clay County Court directed the county surveyor to prepare a cost estimate and specifications for this bridge, one over Carroll Creek [CLAY12] and three other spans. The county solicited competitive bids for the bridges, and in June proposals were received from five bridge companies: the Topeka Bridge and Construction Company, the Kansas City Bridge Company, Walt Archer, C.G. Hamilton, and the Phillips Contracting Company of Buckner, Missouri. Low bidder at $7295.00, Phillips received the contract to build the Shoal Creek Bridge. The contractor reportedly completed the bridge in 1921. Since that time it has functioned in place, with no major alterations.

Unlike many Midwestern states, Missouri did not employ reinforced concrete extensively for construction of vehicular bridge superstructures in the 1910s. The various counties and, to a lesser extent, the state highway department continued to prefer steel for bridge superstructures well after concrete had received widespread acceptance elsewhere. This, combined with subsequent attrition, has resulted in a relatively small number of concrete bridges that exist today from this formative period. Of the more than 13,000 pre-1951 bridges identified in Missouri by the statewide historic bridge inventory, only about 85 are filled spandrel concrete arches. These break down into roughly three equal groups: arches built to carry urban streets, those built by the state highway department in the 1920s and 1930s to carry highways and those built by the counties at rural county road crossings. The Shoal Creek Bridge falls into the third category. With its 55-foot span and 1920-21 construction date, it is among the longer and older of these rural county arches. The Shoal Creek Bridge does not display any features that could be regarded as technologically superlative. Rather, the bridge derives its significance from its representation of the broad trend of concrete bridge construction in Missouri. As a well-preserved and well-documented early concrete arch–designed by a county engineer as the state highway department was just beginning to draft standardized plans–the Shoal Creek Bridge is an important transportation-related resource.

NAME(S) OF STRUCTURE

Shoal 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 N111B21; Clay County Court Record, Book 28: page 285 (19 April 1920), page 362 (14 June 1920) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Chouteau Bridge
MHTD: S007B12

CLAY08

DATE(S) OF CONSTRUCTION
1886-87

LOCATION
Chouteau Drive over Missouri River; S18, T50N, R32W
Kansas City; Clay County, Missouri

USE (ORIGINAL / CURRENT)
railroad bridge / roadway bridge

RATING NRHP eligible (score: 97)

CONDITION
fair

OWNER
Clay County / Jackson County

span number: 3
span length: 404.0'
total length: 1359.0'
roadway wdt.: 20.0'

superstructure: steel, 16-panel, pin-connected Whipple through truss channel spans; 32 plate girder approach spans; 2 steel stringer approach spans on south end; 3 steel stringer approach spans on north end

substructure: concrete abutments with stone masonry channel piers and steel bent approach span piers

floor/decking: concrete over steel bridge deck

other features: upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 4 angles with lacing or 4 punched rectangular eyebars; vertical: 2 built-up channels with lacing (2 punched rectangular eyebars at hips); diagonal: punched rectangular eyebars; upper lateral bracing: round rod; lower lateral bracing: 1 angle; floor beam: riveted plate girder

Linking the Northeast Industrial section of Kansas City, Missouri, to North Kansas City and Clay County, the Chouteau Bridge was built in 1886-87 for the Chicago, Milwaukee and St. Paul Railroad. It spans the Missouri River in a north/south direction, four miles downstream from the confluence of the Kansas and Missouri Rivers. In order to provide funds for the new line, the CM&StP issued income bonds totalling $5,000,000.00. The sale of these bonds, in addition to the existing Chicago and Pacific Western Division bonds, made the Missouri connection a reality. In March 1886, after the right-of-way for this new line was obtained and funding was procured, a contract with the Herman Clark and Company of New York to extend the railroad was approved. Concurrent with this transaction, contracts were let to the Keystone Bridge Works of Pittsburgh for the bridge's superstructure and with Sooy Smith Company of New York for the construction of the bridge's abutments and piers. Charles Louis Strobel, consulting engineer and agent for the Keystone Bridge Works' Chicago office, was chosen as designer for the bridge.

While grading of the railroad line commenced in the spring of 1886, actual construction of the span did not commence until the fall of that year. Work on the massive stone substructure–and later the wrought iron trusses–continued for six months past the July 1887 contract deadline. Finally, on 5 December 1887, the CM&StP opened its new Chicago-Kansas City line. Although the bridge was modified for vehicular traffic in the early 1950s, the structure essentially appears as it was originally constructed. The superstructure features three Whipple truss spans that stretch over the Missouri River. With the design of the Milwaukee Road, Strobel introduced the "A-Iron column." These columns can be found at the trestle-bents where Strobel found that "important advantages could be secured for this part of the

structure by adopting for the compression members a new form of cross-section consisting of four Z-Irons joined by lattice bars in the middle plane." Through the years, there have been several alterations made to the bridge, but the most significant change occurred in 1951-1953 when the bridge was sold to Kansas City and converted to two-lane highway use. As a result of the conversion, the original deck of the bridge was removed and replaced with an open grating and concrete deck. New guardrails were also installed. In addition to these modifications, the name of the bridge was changed to The Francois Chouteau Bridge, in commemoration of the first family of Kansas City, Missouri. On 17 September 1953, the Chouteau Bridge officially opened to highway traffic. The bridge has functioned in place since then, although its demolition is currently being discussed.

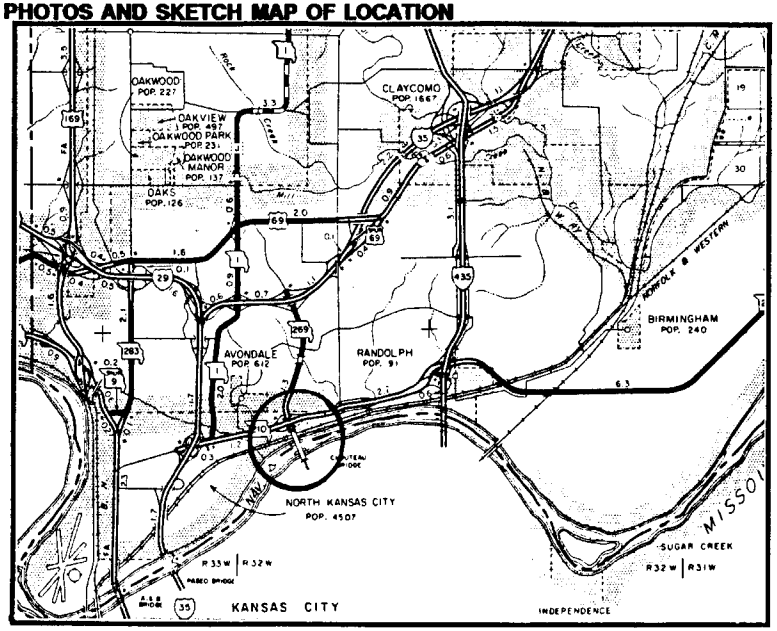
The Chouteau Bridge is the oldest of the fourteen vehicular steel truss bridges spanning the Missouri River that are included in the statewide bridge inventory. As a group, these spans comprise some of the state's longest vehicular crossings. The Chouteau Bridge is historically significant because of its early erection date, and because it served as a strategic railroad crossing into Kansas City for more than fifty years. A pivotal transportation link, the bridge helped open up new areas to settlement, and had a major impact on Kansas City's socioeconomic development.

The Chouteau Bridge is technologically significant because it ranks among the state's longer examples of iron or steel truss construction. With an overall length of 1,359 feet, the multiple-span structure is a superlative example of its type. The structure is also significant because of its Whipple truss design. The Whipple truss differed from the more common Pratt truss in that its diagonal members extended across, not one, but rather two panels. This variation provided greater lateral support for the diagonals, a critical consideration on deep, long-span trusses. Accordingly, most of the railroad bridges built across the Missouri in the 1880s utilized the Whipple design. Few of these structures remain, however, and the Chouteau Bridge is the state's only Missouri River railroad Whipple truss known to have been converted to vehicular use. Having made a significant contribution to Kansas City's historical development, and as a superlative example of a rare bridge type, the Chouteau Bridge is clearly eligible for inclusion in the National Register of Historic Places under both Criteria A and C.

NAME(S) OF STRUCTURE

Chouteau 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 S007B12; Historical American Engineering Record prepared by Harrington & Cortelyou, Inc., Kansas City MO, 1991; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wildwood Avenue Overpass
MHTD: U137013.1

CLAY09

DATE(S) OF CONSTRUCTION
1907

LOCATION
Wildwood Avenue over Henrie Avenue; S1, T52N, R30W
Excelsior Springs; Clay County, Missouri

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 29)

CONDITION
fair

OWNER
Clay County

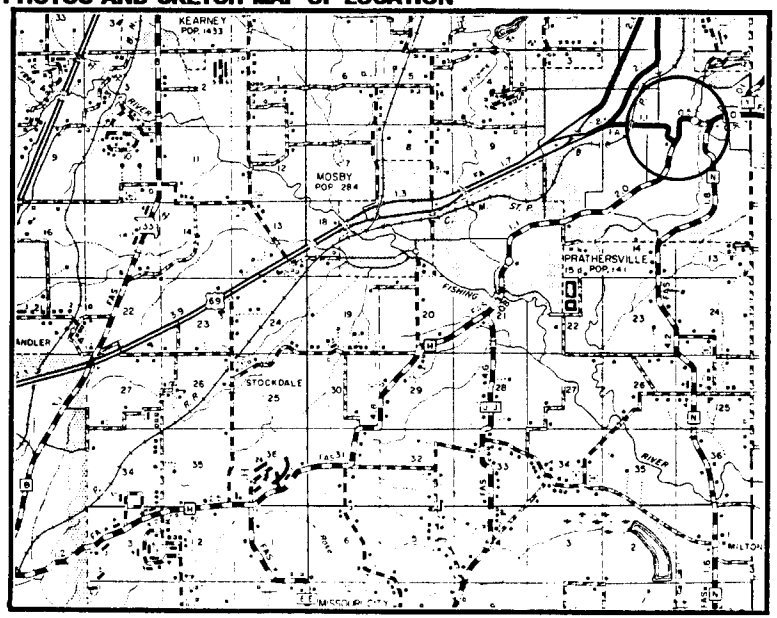
span number:	1	superstructure:	concrete deck girder with arched haunches
span length:	31.0'	substructure:	concrete abutments; stone and concrete wingwalls
total length:	38.0'	floor/decking:	concrete deck
roadway wdt.:	22.5'	other features:	slotted concrete guardrails

This small-scale concrete bridge carries Wildwood Avenue over Henrie Street in the small town of Excelsior Springs. The Wildwood Avenue Overpass consists of a single concrete deck girder span, with four concrete beams that have arched haunches, supported by concrete abutments. Sidewalks on either side of the roadway are supported by cantilevered brackets; these are bounded by slotted concrete guardrails. These guardrails provide the only architectural embellishment for the bridge. They also represent its most serious alteration, for the sidewalks, cantilever brackets and guardrails have all been added to the original structure. Structure Inventory and Appraisal records indicate that the Wildwood Avenue Overpass was built in 1907, although no county records have been found to corroborate this date. The bridge is today distinguished as the oldest remaining concrete girder span in Missouri. Its lack of documentation and subsequent alterations diminish its interpretive value, however.

NAME(S) OF STRUCTURE

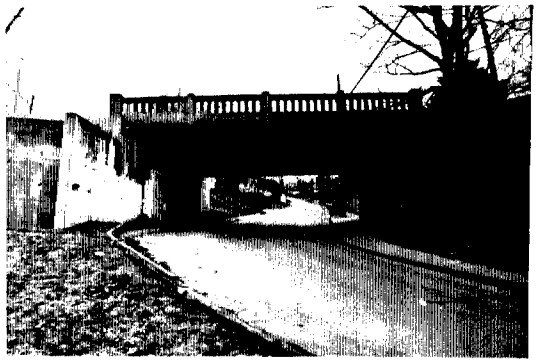
Wildwood Avenue Overpass

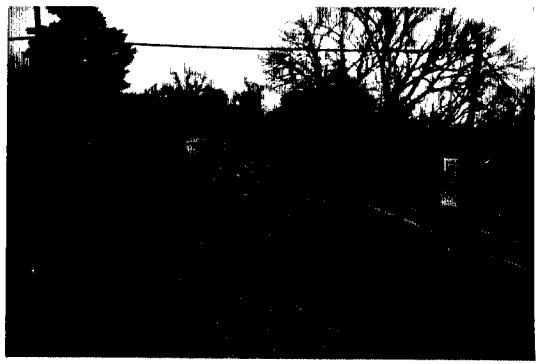
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP





SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number U137013.1; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
New Hope Creek Bridge
MHTD: 049001.6

CLAY11

DATE(S) OF CONSTRUCTION
1919

LOCATION
County Road 49 over New Hope Creek; S14, T53N, R31W
2.9 miles northeast of Kearney; Clay County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 64)

CONDITION
fair

OWNER
Clay County

span number:	2	superstructure:	concrete Luten arch
span length:	43.0'	substructure:	concrete abutments, wingwalls and pier
total length:	103.0'	floor/decking:	earth fill over concrete
roadway wdt.:	15.8'	other features:	concrete guardrails with incised rectangular panels; builder's plate: **BUILT BY THE / TOPEKA / BRIDGE & IRON CO. / TOPEKA KANSAS / 1919**

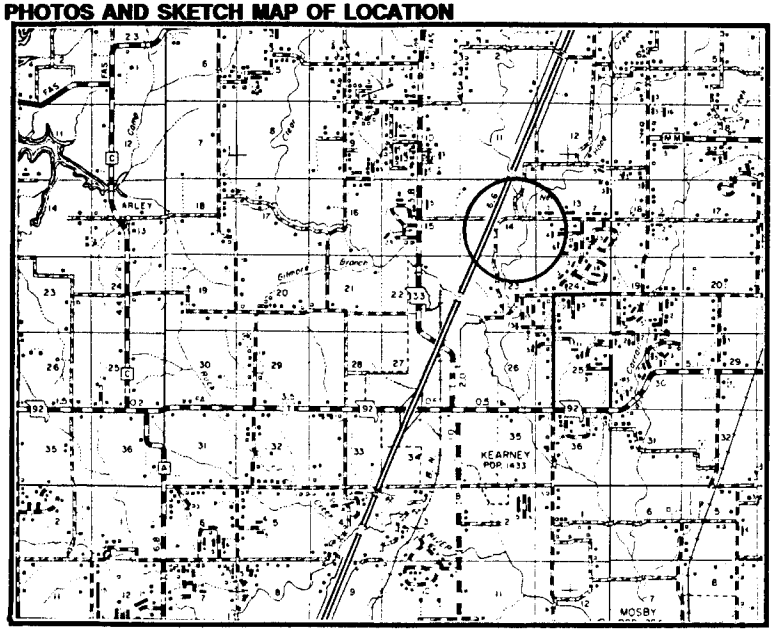
Located in northern Clay County, this bridge carries County Road 49 over New Hope Creek some three miles northeast of Kearney. The structure is comprised of two filled spandrel concrete arches, with concrete substructure and a deck that cantilevers over the arches' spandrel walls on concrete brackets. The arch features the distinctive horseshoe profile, indicating its design source as the patent held by Indianapolis engineer Daniel B. Luten. The New Hope Creek Bridge is one of several Clay County concrete arches built around 1920. In April 1919 the county court directed the county surveyor to prepare plans for a "bridge on the north line in Section 14, T53N, R31W." The county later solicited for competitive bids for the bridge's construction. Two bids were submitted, one by the Topeka Bridge and Iron Company of Kansas, for $5965.00, and a second, higher bid by the Kansas City Bridge Company. The Topeka bid was accepted; construction was completed later that same year. The New Hope Creek has carried vehicular traffic since, with no significant alterations.

Daniel 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 New Hope Creek Bridge in Clay County is distinguished among these for its relatively early construction date and its high degree of physical integrity. Designed and built by one of Daniel Luten's major subsidiaries, it is a well-preserved, small-scale representative of early patented concrete bridge design.

NAME(S) OF STRUCTURE

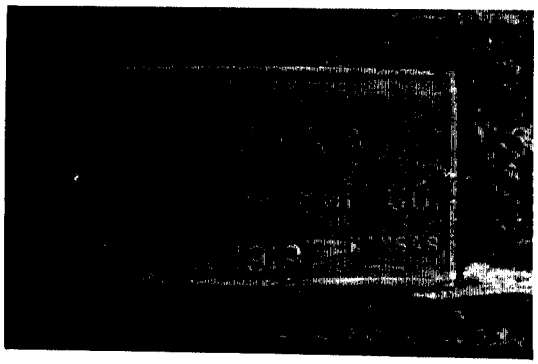
New Hope Creek Bridge

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 049001.6; Clay County Court Record, Book 27: page 494 (3 April 1919), page 521 (5 May 1919) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Carroll Creek Bridge
MHTD: 070002.1

CLAY12

DATE(S) OF CONSTRUCTION
1920-21

LOCATION
County Road 70 over branch of Carroll Creek; S8, T53N, R30W
5.1 miles northeast of Kearney; Clay County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 49)

CONDITION
fair

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	42.0'	substructure:	concrete abutments and wingwalls
total length:	45.0'	floor/decking:	earth fill over concrete
roadway wdt.:	18.0'	other features:	concrete guardrails with recessed rectangular panels

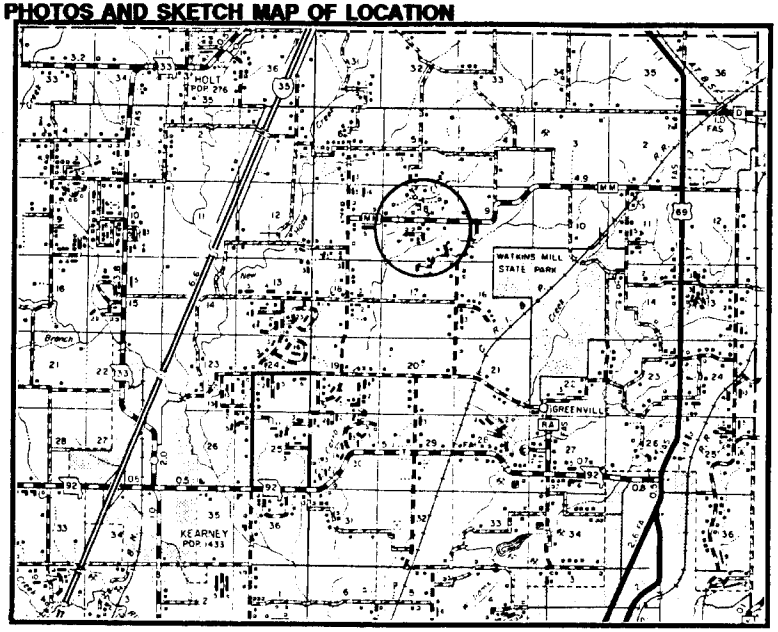
This small-scale concrete arch bridge carries a gravel-surfaced county road overa branch of Carroll Creek northeast of Kearney. The structure consists of a single filled spandrel arch on concrete abutments, featuring plainly detailed concrete guardrails with recessed rectangular panels. The Carroll Creek Bridge dates to 1920. In April of that year the Clay County Court directed the county surveyor to prepare a cost estimate and specifications for this bridge, one over Shoal Creek [CLAY03] and three other spans. The county solicited competitive bids for the bridges, and in June proposals were received from five bridge companies: the Topeka Bridge and Construction Company, the Kansas City Bridge Company, Walter Archer, C.G. Hamilton, and the Phillips Contracting Company. Low bidder at $6980.00, Phillips received the contract to build the Shoal Creek Bridge. The Buckner, Missouri, contractor reportedly completed the bridge in 1921. Since that time it has functioned in place, with no major alterations.

Unlike many Midwestern states, Missouri did not employ reinforced concrete extensively for construction of vehicular bridge superstructures in the 1910s. The various counties and, to a lesser extent, the state highway department continued to prefer steel for bridge superstructures well after concrete had received widespread acceptance elsewhere. This, combined with subsequent attrition, has resulted in a relatively small number of concrete bridges that exist today from this formative period. Of the more than 13,000 pre-1951 bridges identified in Missouri by the statewide historic bridge inventory, only about 85 are filled spandrel concrete arches. These break down into roughly three equal groups: arches built to carry urban streets, those built by the state highway department in the 1920s and 1930s to carry highways and those built by the counties at rural county road crossings. The Carroll Creek Bridge falls into the third category. With its 55-foot span and 1920-21 construction date, it is among the longer and older of these rural county arches. The Carroll Creek Bridge does not display any features that could be regarded as technologically superlative. Rather, the bridge derives its significance from its representation of the broad trend of concrete bridge construction in Missouri. As a well-preserved and well-documented early concrete arch–designed by a county engineer as the state highway department was just beginning to draft standardized plans–the Carroll Creek Bridge is an important transportation-related resource.

NAME(S) OF STRUCTURE

Carroll 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 070002.1; Clay County Court Record, Book 28: page 285 (19 April 1920), page 362 (14 June 1920) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Garland Street Bridge
MHTD: 137000.6

CLAY16

DATE(S) OF CONSTRUCTION
1917

LOCATION
Garland Street over Dry Fork of Fishing River; S12, T52N, R30W
Excelsior Springs; Clay County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 52)

CONDITION
fair

OWNER
Clay County

span number:	1	superstructure:	concrete open spandrel arch
span length:	68.0'	substructure:	concrete abutments and wingwalls
total length:	99.0'	floor/decking:	concrete deck
roadway wdt.:	22.0'	other features:	slotted concrete guardrails; builder's plate: **WESTERN BRIDGE CO. / HARRISONVILLE MO / 1917 / W.C. PATTON / CITY ENGINEER**

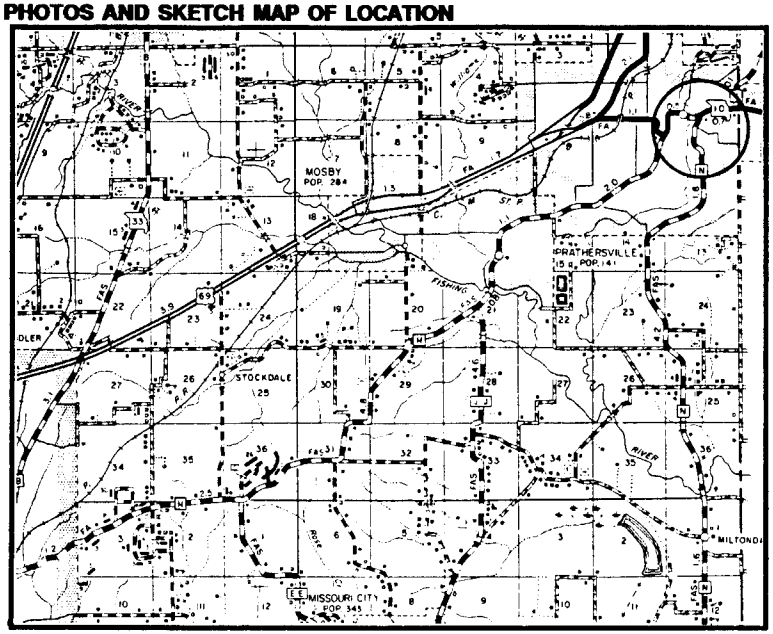
This small-scale concrete bridge carries Garland Street over the Dry Fork of Fishing River in Excelsior Springs. Comprised of an open spandrel concrete arch, the bridge features slotted concrete guardrails as its only architectural detailing. The Garland Street Bridge was designed by city engineer W.C. Patton, who, judging from the distinctive arch profile, may have had assistance from a representative of the Topeka Bridge and Iron Company, then active in the county. The city contracted with the Western Bridge Company of Harrisonville, Missouri, to construct the arch. Completed in 1917, the Garland Street Bridge has functioned in place since, with no serious alterations. It is today noteworthy as an early example of pre-MSHD concrete bridge construction.

Unlike many Midwestern states, Missouri did not employ reinforced concrete extensively for construction of vehicular bridge superstructures in the 1910s. The various counties and, to a lesser extent, the state highway department continued to prefer steel for bridge superstructures well after concrete had received widespread acceptance elsewhere. This, combined with subsequent attrition, has resulted in a relatively small number of concrete bridges that exist today from this formative period. Of the more than 13,000 pre-1951 bridges identified in Missouri by the statewide historic bridge inventory, only about three dozen are open spandrel concrete arches. The Garland Street Bridge is distinguished among these for its relatively early constriction and its well-preserved condition.

NAME(S) OF STRUCTURE

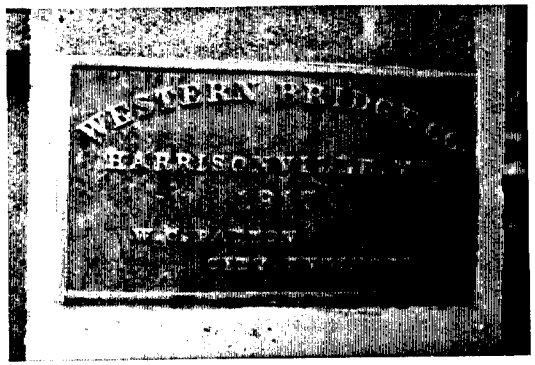
Garland Street Bridge

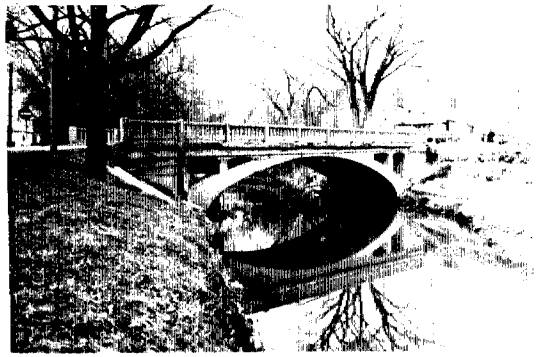
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP





SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 137000.6; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wilkerson Creek Bridge
MHTD: 153001.3

CLAY17

DATE(S) OF CONSTRUCTION
1921

LOCATION
County Road 153 over Wilkerson Creek; S25, T53N, R33W
1.7 miles southeast of Smithville; Clay County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 62)

CONDITION
fair

OWNER
Clay County

span number:	1	superstructure:	concrete Luten arch
span length:	60.0'	substructure:	concrete abutments and wingwalls
total length:	104.0'	floor/decking:	cantilevered concrete
roadway wdt.:	19.0'	other features:	limestone, ashlar rubble facing; 5-panel classical balustrade guardrails

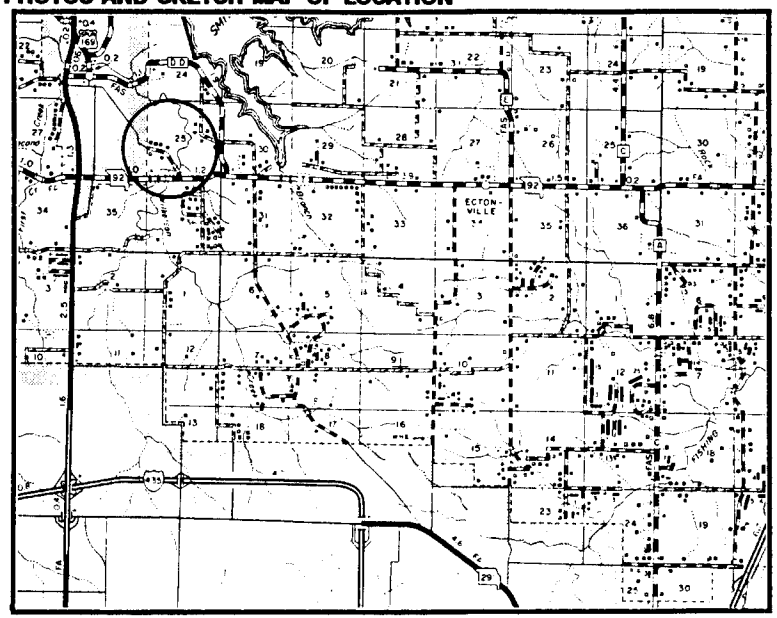
Located southeast of Smithville, this bridge carries County Road 153 over Wilkerson Creek. The structure is comprised of a single filled spandrel concrete arch, with concrete substructure and a deck that cantilevers over the arches' spandrel walls on concrete brackets. The arch features the distinctive horseshoe profile, indicating its design source as the patent held by Indianapolis engineer Daniel B. Luten. The Wilkerson Creek Bridge is one of several Clay County concrete arches built around 1920. In August 1921 the Clay County surveyor provided cost estimates for twenty bridges and culverts of varying sizes to the county court. Later that summer bids for their construction were received from eight bridge contractors: the Kansas City Bridge Company, Buis & Olson, Louis Carr, Walter Archer, Weldin & Kimsey, John Brockman, J. Walter Phillips and the Topeka Bridge and Construction Company. The only contractor from out-of-state, Topeka was the low bidder at $10,904.00 for the Wilkerson Creek structure. The contractor commenced work soon thereafter, presumably finishing the bridge later that year. Since its completion, the Wilkerson Creek Bridge has carried vehicular traffic in essentially unaltered condition.

Daniel 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 Wilkerson Creek Bridge in Clay County is distinguished among these for its high degree of physical integrity. Designed and built by one of Daniel Luten's major subsidiaries, it is a well-preserved, small-scale representative of early patented concrete bridge design.

NAME(S) OF STRUCTURE

Wilkerson 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 153001.3; Clay County Court Record, Book 29: page 366 (12 August 1921), pages 412-419 (no date) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Williams Creek Bridge
MHTD: 354000.2

CLAY22

DATE(S) OF CONSTRUCTION
1919-20

LOCATION
County Road 354 over Williams Creek; S16, T52N, R30W
Mosby; Clay County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 54)

CONDITION
fair

OWNER
Clay County

span number:	2	superstructure:	concrete Luten arch
span length:	48.0'	substructure:	concrete abutments, wingwalls and pier
total length:	119.0'	floor/decking:	earth over concrete fill
roadway wdt.:	18.1'	other features:	bullnosed cutwaters in pier; concrete guardrails with classical cast balusters

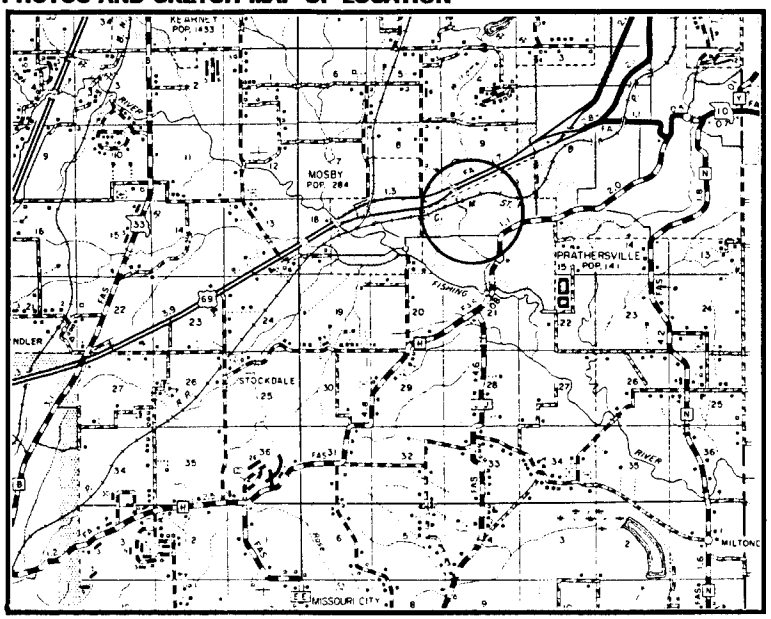
The Williams Creek Bridge in Mosby spans Williams Creek in east-central Clay County. This two-span concrete filled spandrel arch features concrete abutments and wingwalls, with a classical concrete balustrade and bullnosed cutwaters on the center pier. The Williams Creek Bridge dates to 1919. In August of that year the county clerk noted that the "court agrees with the commissioners of Excelsior Springs to pay $4500.00 towards the cost of two bridges", including this structure over Williams Creek. Two months later the court awarded a contract to build the Williams Creek Bridge to the Topeka Bridge and Iron Company for $11,700.00. In July 1920 the court paid $5850.00 toward the bridge's construction, indicating the structure's completion. Since that time the Williams Creek Bridge has functioned in place, with the removal of a portion of its guardrail as the only serious addition.

The Williams Creek Bridge employs a patented arch type that had been developed by Indianapolis engineer Daniel B. Luten in 1905. Luten marketed his arch 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 Williams Creek Bridge in Clay County is a representative example of this early patented concrete bridge design.

NAME(S) OF STRUCTURE

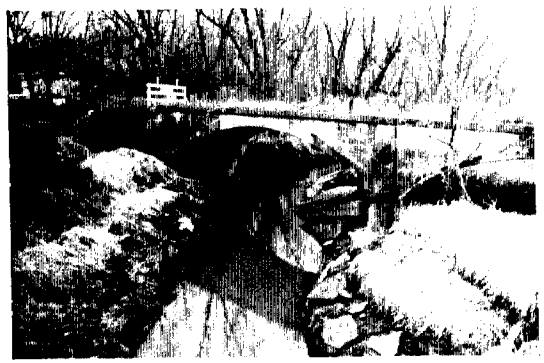
Williams Creek Bridge

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 354000.2; Clay County Court Record, Book 27: page 613 (7 August 1919); Book 28: page 37 (23 October 1919), page 399 (30 July 1920) - located at the Clay County Courthouse, Liberty MO; field inspection by Lon Johnson, 10 February 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	10 September 1994