

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM**



1. NAME OF PROPERTY

HISTORIC NAME: State Highway 27 Bridge at Johnson Fork

OTHER NAMES/SITE NUMBER: I-10 Bridge at Johnson Fork (northbound frontage road); KM0142-01-035

2. LOCATION

STREET & NUMBER: I-10, 0.6 miles west of junction with FM 2169

NOT FOR PUBLICATION: N/A

CITY OR TOWN: Junction

VICINITY: X

STATE: Texas

CODE: TX

COUNTY: Kimble

CODE: 267

ZIP CODE: 76849

3. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Curtis J. Jernell
Signature of certifying official

9-6-96
Date

State Historic Preservation Officer, Texas Historical Commission

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria.
(See continuation sheet for additional comments.)

Signature of commenting or other official

Date

State or Federal agency and bureau

4. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

entered in the National Register
 See continuation sheet.

determined eligible for the National Register
 See continuation sheet.

determined not eligible for the National Register

removed from the National Register

other (explain):

Edson H. Beall
Signature of the Keeper

Date of Action

10-10-96

5. CLASSIFICATION

OWNERSHIP OF PROPERTY: public-State

CATEGORY OF PROPERTY: structure

NUMBER OF RESOURCES WITHIN PROPERTY:	CONTRIBUTING	NONCONTRIBUTING
	0	0 BUILDINGS
	0	0 SITES
	1	0 STRUCTURES
	0	0 OBJECTS
	1	0 TOTAL

NUMBER OF CONTRIBUTING RESOURCES PREVIOUSLY LISTED IN THE NATIONAL REGISTER: 0

NAME OF RELATED MULTIPLE PROPERTY LISTING: Historic Bridges of Texas, 1866-1945

6. FUNCTION OR USE

HISTORIC FUNCTIONS: TRANSPORTATION/road-related (vehicular)

CURRENT FUNCTIONS: TRANSPORTATION/road-related (vehicular)

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: Other: Parker through truss bridge

MATERIALS: FOUNDATION substructure: concrete piers and abutments
WALLS N/A
ROOF N/A
OTHER superstructure: steel truss

NARRATIVE DESCRIPTION (see continuation sheets 7-1 through 7-3)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Historic Bridges of Texas
State Highway 27 Bridge at Johnson Fork
Kimble County, Texas

Section number 7 Page 1

Description:

The State Highway 27 Bridge at Johnson Fork consists of two 120-foot Parker through truss spans and eight steel I-beam approach spans. The bridge carries two lanes of traffic on the northbound frontage road of Interstate 10 (I-10), former State Highway (SH) 27. It is adjacent to the small settlement of Segovia, about eight miles southeast of Junction, the Kimble County seat (see Figure 1). Kimble County is on the Edwards Plateau of southwest Texas at the western edge of the Texas Hill Country. The area's economy relies primarily on wool and mohair production, as well as the cedar, tile and pecan industries.

For the truss spans, Texas Highway Department (THD) engineers chose the THD T24-120 design for a riveted Parker through truss, one of many standard designs the Bridge Division developed. Nine concrete piers and two concrete abutments support the 10 spans of the bridge. Piers one through six, along with an abutment, support the six approach spans on the south end of the bridge. These piers consist of battered cylindrical columns in a dumbbell configuration. Piers seven and eight, the southern two of three piers supporting truss spans, are a cross between dumbbell piers and solid piers. They have the appearance of solid battered piers with rounded ends, but each has a trapezoidal panel or web wall between the columns. The northernmost pier is a solid pier with rounded ends. The single approach span north of the truss spans is supported by this solid pier and an end abutment (see Figure 2). Both the main truss spans and the I-beam approach spans display 12-inch deep steel channel railing, which forms a continuous line over the bridge's entire length (see Photographs 1 and 2).

In 1937 and 1938, Word & Worrell built the Johnson Fork bridge under contract to THD. From 1967 to 1969, THD constructed new bridges over Johnson Fork, converting the truss bridge and its approach roadways into the northbound frontage road. No other major alterations have been performed. As such, the bridge retains integrity of design, materials and workmanship. Because it remains in place serving vehicular traffic on a state highway, it also retains integrity of location and association. Although the construction of the new bridges has somewhat compromised integrity of setting and feeling, the truss bridge retains substantial integrity overall. Although no projects are currently planned for this bridge, its BRINSAP sufficiency rating as of October 1994 of 69.5, making the bridge eligible for rehabilitation, but not replacement, under the federal Highway Bridge Replacement and Rehabilitation Program (HBRRP).

GENERAL SPECS

TRUSS TYPE: Parker through
 THD STD. DESIGN: T24-120
 NO. TRUSS SPANS: 2
 TRUSS SPAN LENGTH: 120'
 ROADWAY WIDTH: 24'
 DECK WIDTH: 26'
 APPROACH SPANS: 6 - 50' & 2 - 60' I-beam spans
 OVERALL LENGTH: 666'

SUPERSTRUCTURE

TRUSS DEPTH: 27'0"
 TRUSS PANELS: 6 - 20'0" panels
 TOP CHORD & END POSTS: 2 channels w/ cover plate and lacing
 BOTTOM CHORD: 2 channels w/ batten plates
 VERTICAL POSTS: 2 channels w/ lacing or I-beam
 DIAGONAL MEMBERS: 2 angles w/ batten plates or I-beam
 DECK TYPE: concrete

SPECIAL FEATURES

BRIDGE PLAQUE: none
 APPROACH RAILING: steel channel railing
 OTHER: none

SUBSTRUCTURE

PIERS/INTERIOR BENTS: concrete piers
 THD STD. DESIGN: n/a
 ABUTMENTS/END BENTS: concrete abutments
 THD STD. DESIGN: n/a

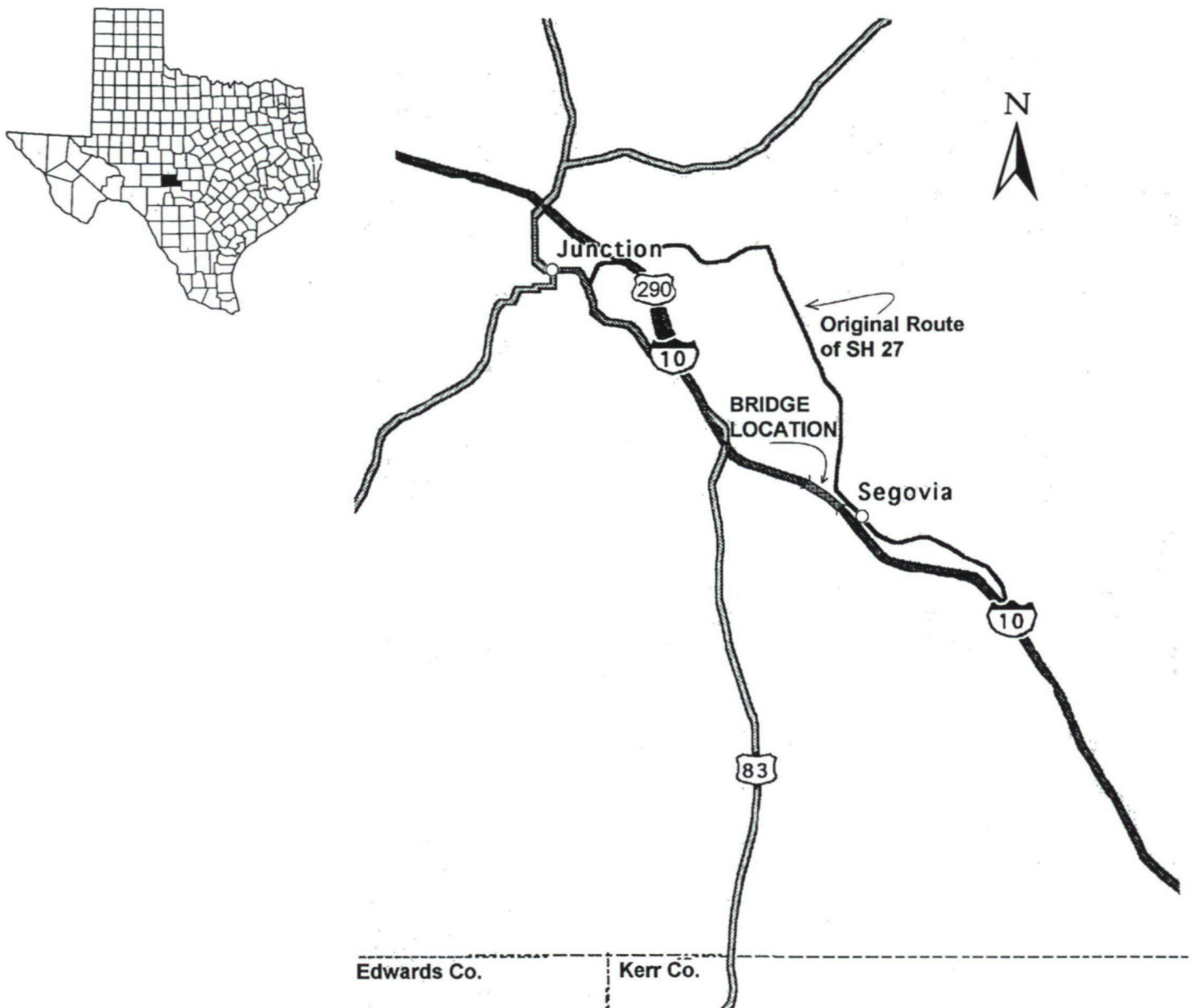
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Historic Bridges of Texas
State Highway 27 Bridge at Johnson Fork
Kimble County, Texas

Section number 7 Page 2

Figure 1. Map of I-10 (former SH 27) showing the location of the Johnson Fork bridge.



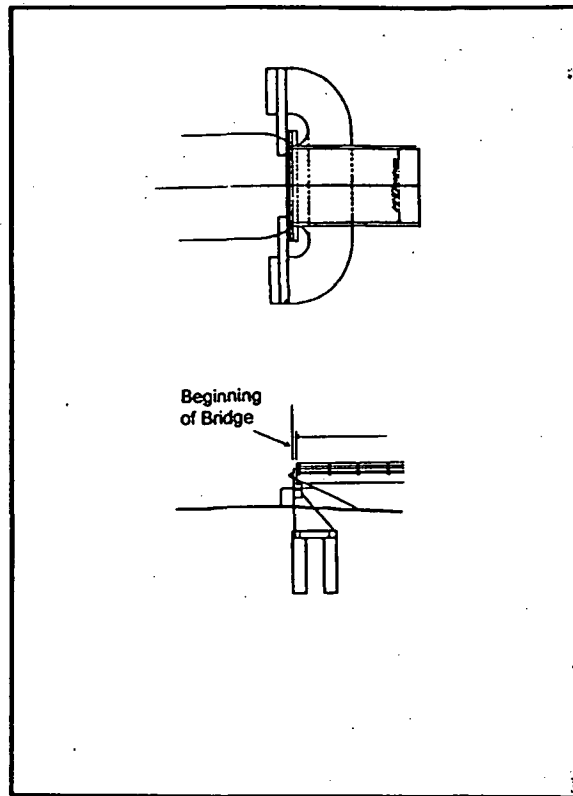
United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

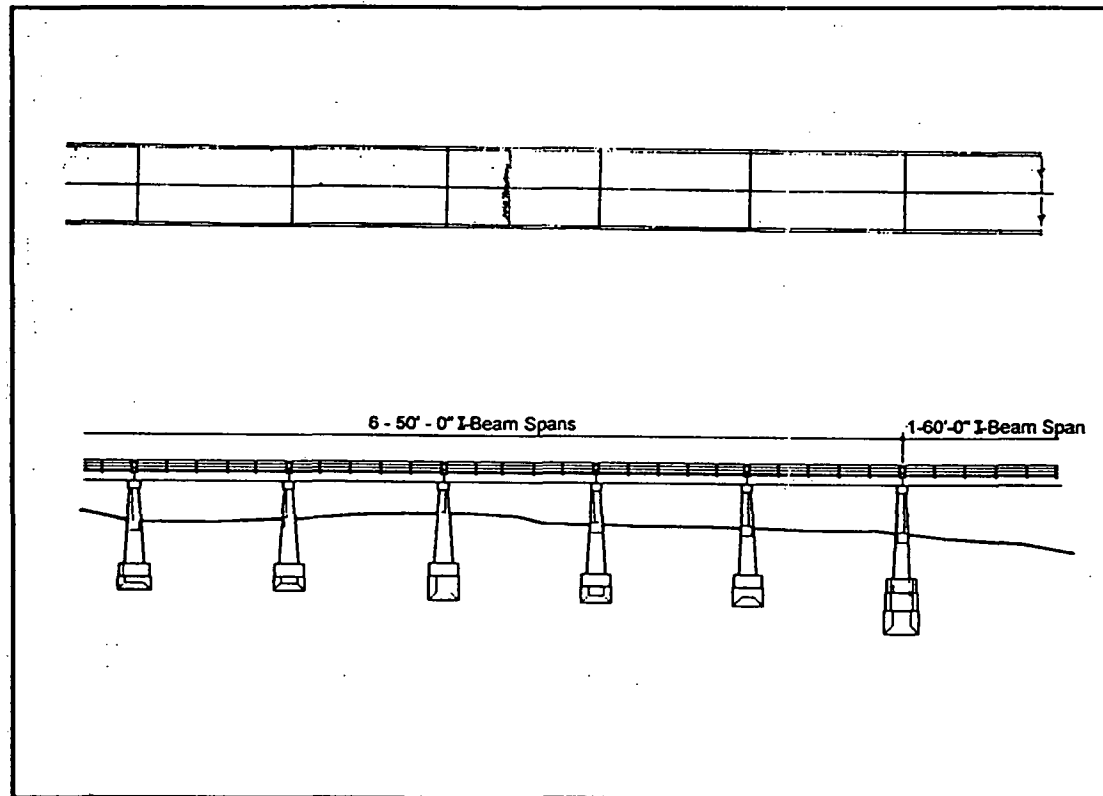
Section number 7 Page 3

Historic Bridges of Texas
State Highway 27 Bridge at Johnson Fork
Kimble County, Texas

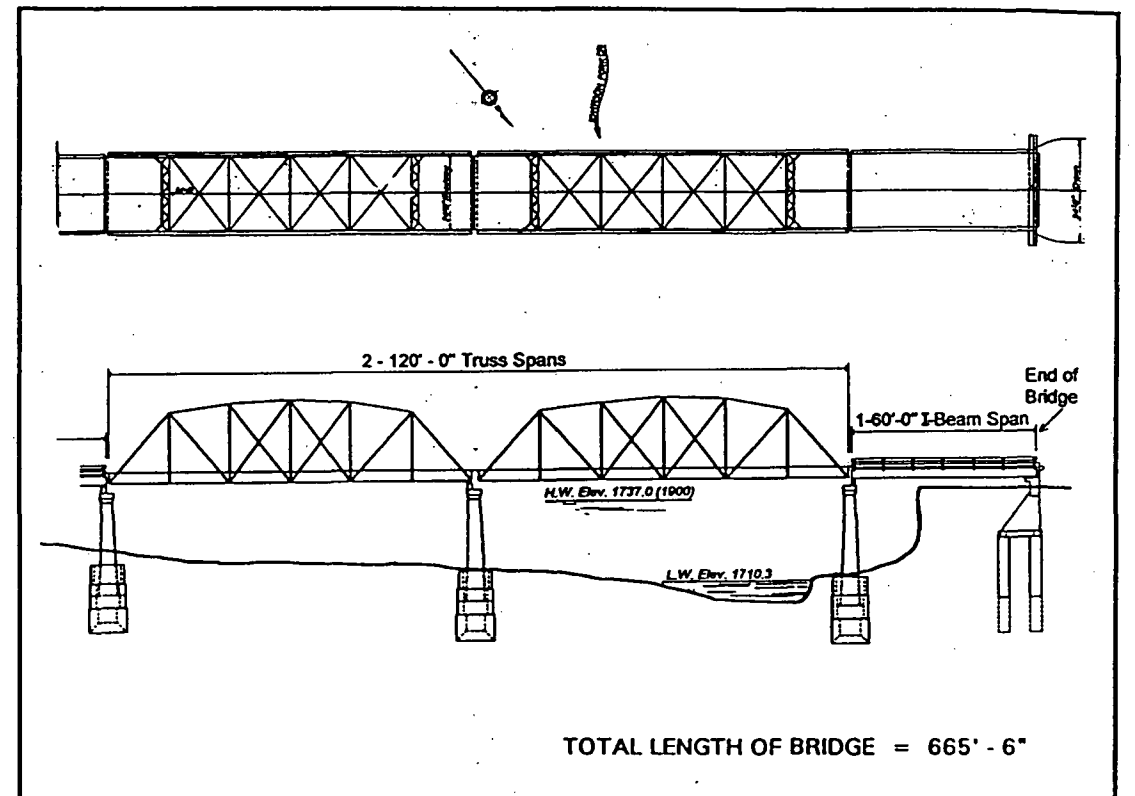
Figure 2. Elevation of the Johnson Fork bridge as shown in the 1937 plans.



PLAN SHEET 1 OF 3



PLAN SHEET 2 OF 3



PLAN SHEET 3 OF 3

8. STATEMENT OF SIGNIFICANCE

APPLICABLE NATIONAL REGISTER CRITERIA

- A** PROPERTY IS ASSOCIATED WITH EVENTS THAT HAVE MADE A SIGNIFICANT CONTRIBUTION TO THE BROAD PATTERNS OF OUR HISTORY.
- B** PROPERTY IS ASSOCIATED WITH THE LIVES OF PERSONS SIGNIFICANT IN OUR PAST.
- C** PROPERTY EMBODIES THE DISTINCTIVE CHARACTERISTICS OF A TYPE, PERIOD, OR METHOD OF CONSTRUCTION OR REPRESENTS THE WORK OF A MASTER, OR POSSESSES HIGH ARTISTIC VALUE, OR REPRESENTS A SIGNIFICANT AND DISTINGUISHABLE ENTITY WHOSE COMPONENTS LACK INDIVIDUAL DISTINCTION.
- D** PROPERTY HAS YIELDED, OR IS LIKELY TO YIELD, INFORMATION IMPORTANT IN PREHISTORY OR HISTORY.

CRITERIA CONSIDERATIONS: N/A

AREAS OF SIGNIFICANCE: Engineering

PERIOD OF SIGNIFICANCE: 1937-1938

SIGNIFICANT DATES: 1937-1938

SIGNIFICANT PERSON: N/A

CULTURAL AFFILIATION: N/A

ARCHITECT/BUILDER: Bridge Designer: Texas Highway Department
Truss Fabricator: Mosher Steel Company of Houston, Texas, owned by
the Mosher Steel & Machinery Company of Dallas, Texas
Bridge Builder: Word & Worrell of San Antonio, Texas

NARRATIVE STATEMENT OF SIGNIFICANCE (see continuation sheet 8-4)

9. MAJOR BIBLIOGRAPHIC REFERENCES

BIBLIOGRAPHY (see continuation sheet 9-5)

PREVIOUS DOCUMENTATION ON FILE (NPS): N/A

- preliminary determination of individual listing (36 CFR 67) has been requested.
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey #
- recorded by Historic American Engineering Record #

PRIMARY LOCATION OF ADDITIONAL DATA:

- State historic preservation office (*Texas Historical Commission*)
- Other state agency (*Texas Department of Transportation*)
- Federal agency
- Local government
- University
- Other -- Specify Repository:

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Historic Bridges of Texas
State Highway 27 Bridge at Johnson Fork
Kimble County, Texas

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Statement of Significance:

The State Highway 27 Bridge at the Johnson Fork is significant for embodying the defining characteristics of a THD truss bridge. As such, it meets National Register Criterion C in the area of Engineering at a state level of significance.

The Johnson Fork bridge was built on SH 27 (now I-10), which originally linked El Paso and Fort Stockton, with a later extension to San Antonio through Sonora, Junction, Kerrville and Bandera. By 1932, the route was designated SH 27/US 290. By 1949, the original SH 27 designation had been dropped. Beginning about 1968, this route was upgraded and designated I-10.

The Johnson Fork bridge was built as part of a seven-mile reconstruction of SH 27 between Junction and Segovia on a straighter alignment. The project encompassing the Johnson Fork bridge also included one-half mile of roadway and a multiple box culvert (widened in 1957). The construction of the rest of the new roadway was covered under a related project. THD prepared the plans for the bridge project and, because it was a federal aid project, the Bureau of Public Roads (BPR) reviewed and approved them. The THD resident engineer in Junction supervised the construction, which engineers from both THD and BPR inspected.

THD bridge engineers chose the T24-120 design for the truss spans of the Johnson Fork bridge. The T24-120 is one of 25 different THD standard designs the Bridge Division developed for Parker through truss spans; only 11 of these designs are represented by Texas bridges today. The T24-120 was first designed about 1926; a second version was completed about 1932. The Johnson Fork bridge is one of only two surviving examples of the latter version of the T24-120. It is also unique for the combination of pier types used for the substructure.

The Texas Highway Commission held bidding for the project in June 1937. After reviewing the seven bids submitted, the commission awarded the contract to Word & Worrell of San Antonio, which submitted the low bid of about \$119,000. The Mosher Steel Company of Houston, formerly Houston Structural Steel Company, owned by the Mosher Steel & Machinery Company of Dallas, fabricated the steel portion of the bridge. Work on the bridge began on July 8, 1937, and was completed on April 4, 1938. The total cost of the project, including the culvert and approach roadway, came to nearly \$128,000; the federal contribution was about \$62,000.

From 1967 to 1969, THD responded to increasing traffic volumes on US 290 by constructing two concrete beam bridges on the west side of the Johnson Fork bridge to serve the main traffic lanes. The original truss bridge and approach roadway was retained in place on what became the northbound frontage road. This configuration lightened the traffic burden on the truss bridge, allowing for its preservation in place. Although the construction of the new structures has somewhat altered the setting of the truss bridge, as transportation facilities they are compatible with the use of the original bridge and therefore do not significantly compromise its integrity.

10. GEOGRAPHICAL DATA

ACREAGE OF PROPERTY: less than one acre

UTM REFERENCES	Zone	Easting	Northing	Zone	Easting	Northing
1	14	434820	3365970	3	—	—
2	—	—	—	4	—	—

(— see continuation sheet)

VERBAL BOUNDARY DESCRIPTION (see continuation sheet 10-5)

BOUNDARY JUSTIFICATION (see continuation sheet 10-5)

11. FORM PREPARED BY

NAME/TITLE:	text by Regina A. Lauderdale graphics by Pat St. George	
ORGANIZATION:	Texas Historical Commission/ Texas Department of Transportation	DATE: September 1996
STREET & NUMBER:	Texas Historical Commission P.O. Box 12276	TELEPHONE: 512/463-6094
CITY OR TOWN:	Austin STATE: TX	ZIP CODE: 78711

ADDITIONAL DOCUMENTATION

CONTINUATION SHEETS

MAPS

PHOTOGRAPHS

ADDITIONAL ITEMS

PROPERTY OWNER

NAME	Texas Department of Transportation	
STREET & NUMBER	125 East 11th Street	TELEPHONE 512/416-2606
CITY OR TOWN	Austin STATE TX	ZIP CODE 78701

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State Highway 27 Bridge at Johnson Fork
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Bibliography:

Texas Highway Department. *General Information on Texas Highways*. Austin: Von Boeckmann-Jones, 1919.

Texas Highway Department. Plans of Proposed State Highway Improvement. Control-Section-Job No. 0142-01-007, located at TxDOT headquarters in Austin.

Texas Highway Department. Project Correspondence Files. Control-Section-Job No. 0142-01-007, located at TxDOT headquarters in Austin.

Verbal Boundary Description:

The nomination boundaries encompass the complete structure, State Highway 27 Bridge at the Johnson Fork, including the approach spans and steel approach railing, as well as the ground upon which the structure stands.

Boundary Justification:

The boundary includes all components historically associated with the property.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY State Highway 27 Bridge at Johnson Fork
NAME:

MULTIPLE Historic Bridges of Texas MPS
NAME:

STATE & COUNTY: TEXAS, Kimble

DATE RECEIVED: 9/09/96 DATE OF PENDING LIST: 9/24/96
DATE OF 16TH DAY: 10/10/96 DATE OF 45TH DAY: 10/24/96
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 96001113

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 10-10-96 DATE

ABSTRACT/SUMMARY COMMENTS:

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

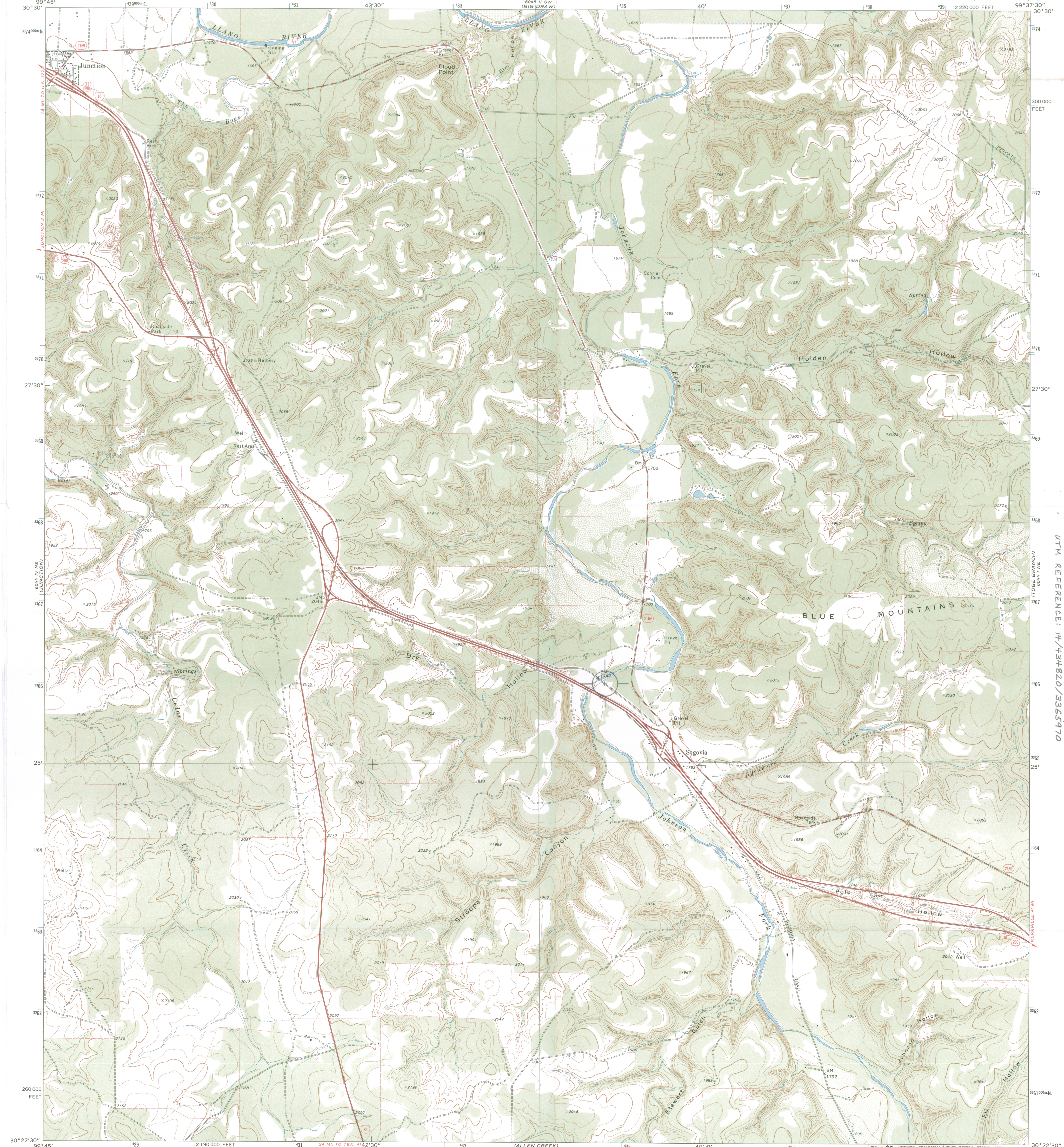
DOCUMENTATION see attached comments Y/N see attached SLR Y/N



SITE NO. KM0142-01-035
SH 27 BRIDGE AT JOHNSON FORK
HISTORIC BRIDGES OF TEXAS
KIMBLE CO., TEXAS
PHOTOGRAPH 1 OF 2



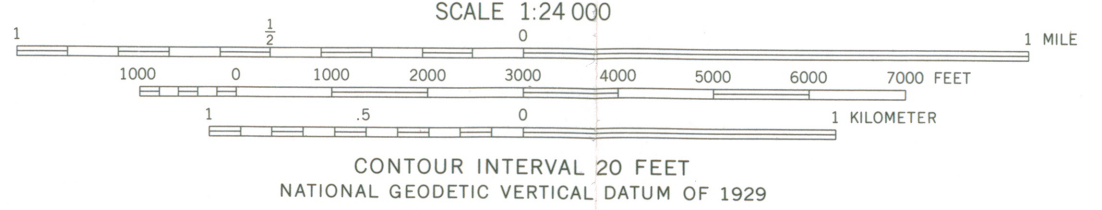
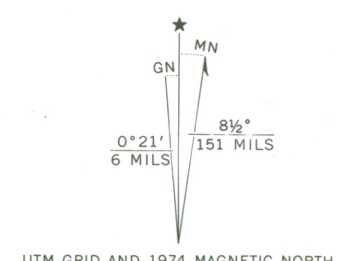
SITE NO. KM0142-01-035
SH 27 BRIDGE AT JOHNSON FORK
HISTORIC BRIDGES OF TEXAS
KIMBLE CO., TEXAS
PHOTOGRAPH 2 OF 2



HISTORIC BRIDGES OF TEXAS
SH 27 BRIDGE AT JOHNSON FORK
VICINITY OF SEGOVIA, KIMBLE CO., TEXAS
UTM REFERENCE: 14/434820/3365970

SITE NO: KM0142-01-035

Mapped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial
photographs taken 1973. Field checked 1974
Projection and 10,000-foot grid ticks: Texas
coordinate system, central zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks,
zone 14, shown in blue. 1927 North American datum
Fine red dashed lines indicate selected fence lines



ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U. S. Route
	State Route



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

3099- 243

SEGOVIA, TEX.
N3022.5-W9937.5/7.5
1974
AMS 6044 1 NW-SERIES V882