

HABS/HAER INVENTORY

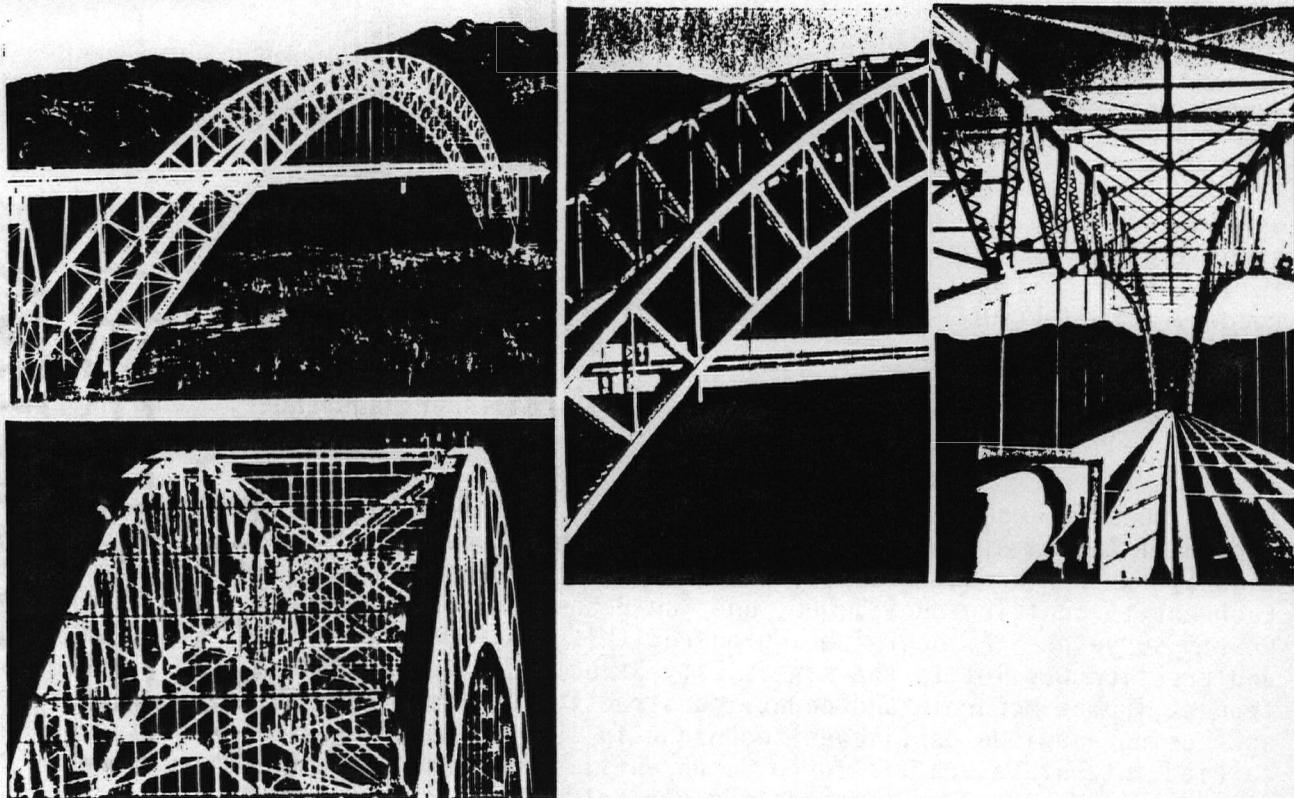
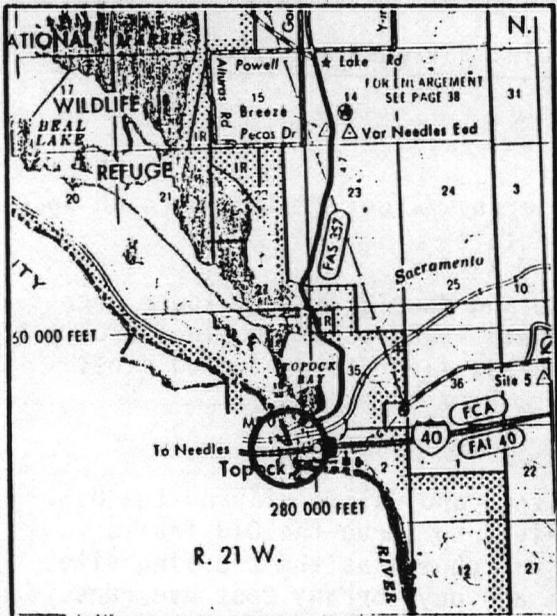
See "HABS/HAER Inventory Guidelines" before filling out this card.

1. NAME(S) OF STRUCTURE	3. DATE(S) OF CONSTRUCTION		
Old Trails Bridge (Topock Bridge; Needles Bridge)	1915-16		
2. LOCATION	4. USE (ORIGINAL/CURRENT)		
Abandoned U.S. 66 over the Colorado River	highway bridge / pipeline bridge		
Topock; NW1/4 S2 T15N R21W	5. RATING		
Mohave County, Arizona	NRHP eligible: national significance		
6. CONDITION			
excellent	owner: El Paso Natural Gas Company		
span number : 1	superstructure: riveted steel 3-hinge brace-ribbed through arch w/steel girder approach spans		
span length : 592.0'	substructure : concrete abutments, wingwalls and arch pedestals		
total length: 832.0'	floor/decking : steel grid walkways		
roadway wdt.: 17.0'	other features: upper arch chord: 2 channels w/ cover plate and double lacing; lower arch chord: 2 channels w/ double webbing; diagonal: 4 angles w/ webbing; arch post: 2 angles w/ webbing; lateral bracing: 2 angles; floor tie: riveted steel plate girder; suspender: round steel rod		
7. DESCRIPTION			
8. HISTORICAL DATA	<p>As the Ocean-to-Ocean Bridge (8533) was under construction in 1914, the states of Arizona and California and the U.S. Bureau of Indian Affairs sought to erect another substantial span over the Colorado River to serve the Old Trails Highway further north. Topock, Arizona - halfway between Yuma and the Utah Border - was chosen as the crossing site. Each entity contributed \$25,000, and San Bernardino County agreed to design the bridge and pay for any cost overruns. County surveyor S.A. Sourwine engineered this long-span steel arch. On June 30, 1915, the contract for fabrication and erection was let to the Kansas City Structural Steel Company. Under the direction of company construction superintendent Thomas McCurnin and county construction engineer J.P. Kimmerer, Kansas City poured the footings and erected the arch using a unique cantilever technique in 1915. The bridge was completed on February 20, 1916. The Topock Bridge carried interstate traffic for U.S. 66 until 1947, when traffic was transferred to the nearby Red Rock Bridge. In 1948, its deck was removed to accommodate a natural gas pipeline, which it still carries.</p>		
9. SIGNIFICANCE	<p>The Topock Bridge is historically significant in the Southwest as a pivotal crossing on the transcontinental Old Trails Highway. Technologically, the structure is nationally significant as an outstanding example of steel arch construction, called by the <u>Engineering Record</u>, "exceptionally daring and successful for work of such magnitude." Taking a cue from the difficulties experienced at Yuma, engineers for Kansas City Steel erected this bridge using a novel cantilever system, in which the bridge halves were assembled on their sides on the ground and hoisted into place using a unique ball-and-socket center hinge. At its completion the longest arch bridge in America, the 360-ton Topock Bridge was also distinguished as the lightest and longest three-hinged arch. The removal of the deck has done little to compromise the bridge, and it remains a landmark in American civil engineering.</p>		

10. NAME(S) OF STRUCTURE

NAME(S) OF STRUCTURE: Old Trails Bridge (Topock Bridge; Needles Bridge)

11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM DEPARTMENT OF TRANSPORTATION
GENERAL HIGHWAY MAP

Don Abbee & Roger Brevoort, "Draft nomination to National Register of Historic Places," n.d.

David Plowden, *Bridges: The Spans of North America*, (New York: The Viking Press, 1974), page 178.

Field inspection by Clayton Fraser, 9 December 1986.

12 sources

13. INVENTORIED BY:

Clayton B. Fraser

AFFILIATION

Fraserdesign Loveland Colorado

DATE

1 April 1987

8/17/88

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Section number _____ Page _____

Multiple Resource Area
Thematic GroupName Vehicular Bridges in Arizona MPS
State Apache County and others, ARIZONA

Nomination/Type of Review

Date/Signature

50 31. Fish Creek Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

5 32. Gila Bend Overpass Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

33. Hassayampa River Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

5 34. Lewis and Pranty Creek Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

35. Mormon Flat Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

5 36. Pine Creek Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

37. Tempe Bridge Substantive Review for Keeper Patrick Andrus 9/30/88
Attest _____

5 38. Mohave County Old Trails Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

39. Sand Hollow Wash Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

5 40. Navajo County Cedar Canyon Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 scr
Attest _____

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: Various

Date Listed: 9/30/88

Various
Property Name

Various
County

Arizona
State

Vehicular Bridges in Arizona
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

for Patrick Andrus
Signature of the Keeper

9/30/88
Date of Action

Amended Items in Nomination:

There were several nominations included with this multiple property submission which defined and justified periods of significance extending into the less than fifty year old range to correspond with criterion A significance although the resources' dates of construction actually occurred well over fifty years ago. For all of these bridges, the period of significance should be concluded in 1938 to conform with National Register requirements. The following bridges are included in this category:

Petrified Forest, Querino, Hereford, Douglas Underpass, Dead Indian Canyon, Pumphouse Wash, Walnut Canyon, Fossil Creek, Black River, Salt River, Salt River Canyon, Reppy Avenue, Black Gap, Gila River, Park Avenue, Solomonville Road Overpass, Solomonville Road Overpass (Clifton), Gila Bend Overpass, Hassayampa River, Lewis and Pranty Creek, Mormon Flat, Fish Creek, Pine Creek, Sand Hollow Wash, Old Trails, Corduroy, Cedar Canyon, Holbrook, Jack's Canyon, Little Lithodendron Wash, Lithodendron Wash, St. Joseph, Woodruff, Cienega, Fourth Avenue Underpass, Sixth Avenue Underpass, Stone Avenue Underpass, Alchesay Canyon, Devil's Canyon, Queen Creek (Florence Junction vicinity), Queen Creek (Superior vicinity), Kelvin, Mineral Creek, Sacaton Dam, San Tan Canal, Winkelman, Santa Cruz No. 1, Broadway, Hell Canyon, Little Hell Canyon, Lynx Creek, Verde River, and Walnut Grove. (Period of significance issues discussed with Pat Stein of the AZ SHPO.)

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Old Trails Bridge

MULTIPLE NAME: Vehicular Bridges in Arizona MPS

STATE & COUNTY: ARIZONA, Mohave

DATE RECEIVED: 8/17/88

DATE OF PENDING LIST: 8/30/88

DATE OF 16TH DAY: 9/15/88

DATE OF 45TH DAY: 10/01/88

DATE OF WEEKLY LIST:

REFERENCE NUMBER: 88001676

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: Y LANDSCAPE: N LESS THAN 50 YEARS: Y

OTHER: N PDIL: N PERIOD: Y PROGRAM UNAPPROVED: N

REQUEST: N SAMPLE: Y SLR DRAFT: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 9/30/88 DATE

ABSTRACT/SUMMARY COMMENTS:

ABSTRACT/SUMMARY COMMENTS (CONTINUED FROM PREVIOUS SIDE)

Nomination justifies significance under A&C. SLR Decision: Accept - A,C
form completed to resolve period of significance issue. Date: 9/20/88
Signature: Noble
Title: Historian

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

CLASSIFICATION

count resource type

STATE/FEDERAL AGENCY CERTIFICATION

FUNCTION

historic current

DESCRIPTION

architectural classification materials descriptive text

SIGNIFICANCE

criteria criteria considerations areas of sig.
 periods of sig. significant dates cultural affl.
 sig. person architect/builder sig. statement

BIBLIOGRAPHY

GEOGRAPHICAL DATA

acreage verbal boundary description
 UTM's boundary justification

ACCOMPANYING DOCUMENTATION/PRESENTATION

sketch maps USGS maps photographs presentation

OTHER COMMENTS

Questions concerning the nomination may be directed to

Signed _____ Date _____ Phone _____



66) OLD TRAIL'S BRIDGE (ARIZONA VEHICULAR BRIDGE)

