

# HABS/HAER INVENTORY

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

<b>1. NAME(S) OF STRUCTURE</b> Old Trails Bridge (Topock Bridge, Needles Bridge)	<b>3. DATE(S) OF CONSTRUCTION</b> 1915-16
<b>2. LOCATION</b> Abandoned U.S. 66 over the Colorado River Topock; NW1/4 S2 T15N R21W Mohave County, Arizona	<b>4. USE (ORIGINAL/CURRENT)</b> highway bridge / pipeline bridge
	<b>5. RATING</b> NRHP eligible: national significance

<b>6. CONDITION</b> excellent	owner: El Paso Natural Gas Company
<b>7. DESCRIPTION</b> span number : 1 span length : 592.0' total length: 832.0' roadway wdt.: 17.0'	superstructure: riveted steel 3-hinge brace-ribbed through arch w/steel girder approach spans substructure : concrete abutments, wingwalls and arch pedestals floor/decking : steel grid walkways 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

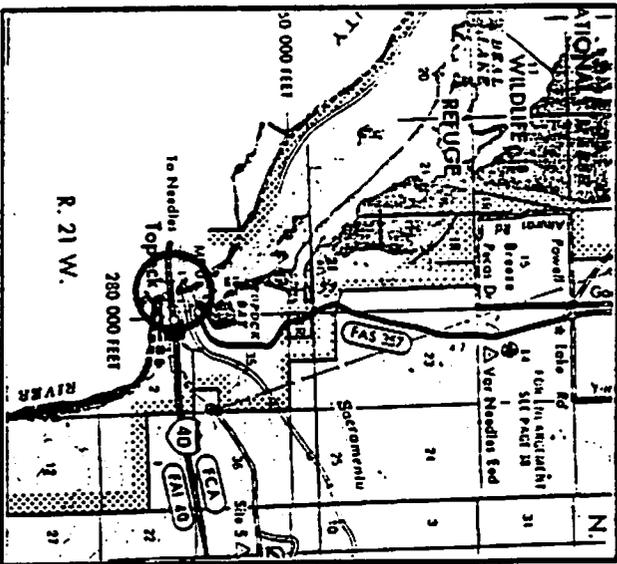
**8. HISTORICAL DATA**

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 Bernadino 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 accomodate a natural gas pipeline, which it still carries.

**9. SIGNIFICANCE**

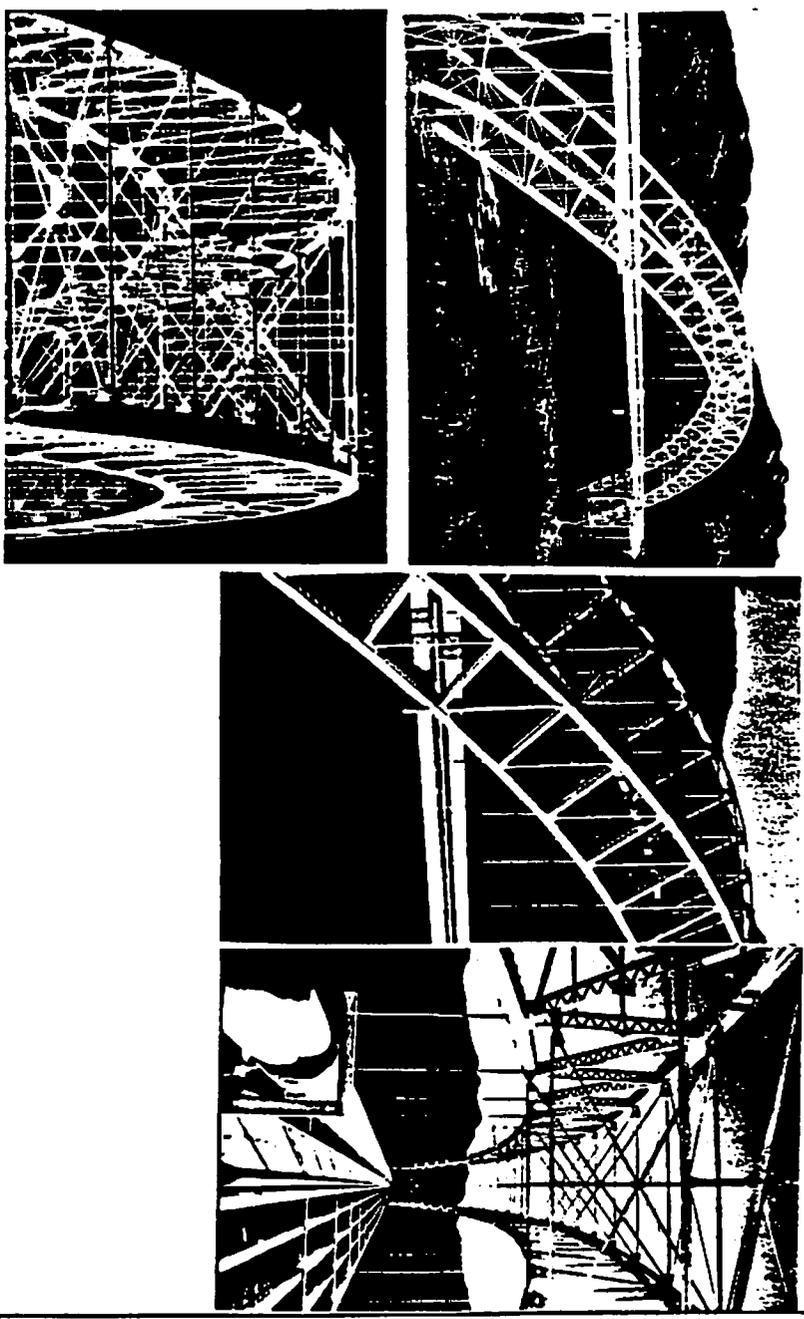
The Topock Bridge is historically significant in the Southwest as a pivotal crossing on the transcontinental Old Trails Highway. Technologically, the structure is nationally significant as an outstanding example of steel arch construction, called by the Engineering Record, "exceptionally daring and successful 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.

10. 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

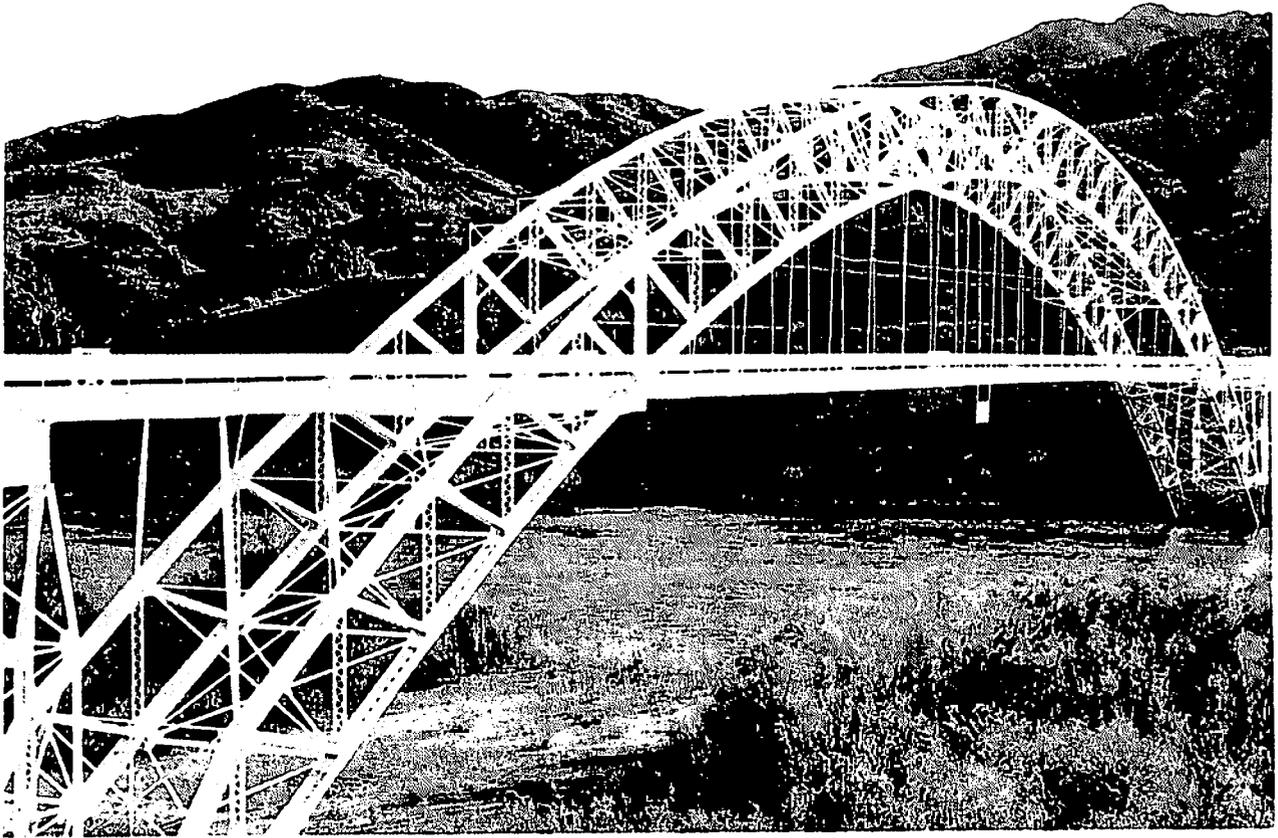
Don Abbee & Roger Brevoort, "Draft nomination to National Register of Historic Places," n.d.  
 David Plowden, Bridges: The Spans of North America, (New York: The Viking Press, 1974), page 178.  
 Field inspection by Clayton Fraser, 9 December 1985.



13. INVENTORIED BY:  
 Clayton B. Fraser

AFFILIATION  
 Fraserdesign Loveland Colorado

DATE  
 1 April 1987



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 Various Arizona  
Property Name County State

Vehicular Bridges in Arizona  
Multiple Name

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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 Andrews  
Signature of the Keeper

9/30/88  
Date of Action

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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.)

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DISTRIBUTION:

- National Register property file
- Nominating Authority (without nomination attachment)