

# 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>4. USE (ORIGINAL/CURRENT)</b> highway bridge / pipeline bridge <b>5. RATING</b> NRHP eligible: national significance
<b>2. LOCATION</b> Abandoned U.S. 66 over the Colorado River Topock; NW1/4 S2 T15N R21W Mohave County, Arizona	
<b>6. CONDITION</b> excellent owner: El Paso Natural Gas Company	
<b>7. DESCRIPTION</b> 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	
<b>8. HISTORICAL DATA</b> 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.	
<b>9. SIGNIFICANCE</b> 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.	