PART OF: Vehicular Bridges in Arizona
MPS

HABS/HAER INVENTORY

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

1. NAME(S) OF STRUCTURE
Tucson Underpasses: ADOT: 8453
Fourth Avenue, Sixth Avenue and Stone Avenue 1580
0169

2. LOCATION
Fourth Avenue, Sixth Avenue and Stone Avenue under SP Railroad
Tucson; S20-12-12 T14S R13E
Pima County, Arizona

3. DATE(S) OF CONSTRUCTION
1914-16; 1930; 1935-36

4. USE (ORIGINAL/CURRENT)
city street underpass / city street underpas

5. RATING
NRHP eligible: local significance

6. CONDITION
fair / good

owner: City of Tucson, Arizona (Fourth); Arizona Department of Trans. (Sixth and Stone

7. DESCRIPTION

Fourth Avenue		Sixth Avenue		Stone Avenue	
span number	: 2	span number	: 4	span number	: 2
span length	: 12.0'	span length	: 14.0'	span length	: 25.0'
total length	: 257.0'	total length	: 42.0'	total length	: 76.0'
roadway width	: 26.0'	roadway width	: 80.0'	roadway width	: 49.0'

superstructure: reinforced concrete slab and rigid frame
substructure : concrete abutments and retaining walls w/ spill through concrete piers
floor/decking : asphalt paving (street); stone and earth fill (railroad)
other features: architectural treatment (see item 9)

8. HISTORICAL DATA

Dating from the late 1870s, the Southern Pacific Railroad provided a vital transportation link for the southern Arizona city of Tucson as it passed through the city center. But the heavy rail traffic on the railroad's main line posed problems for street traffic, snarling traffic and creating dangerous on-grade crossings. In 1913, the city moved to separate 4th Avenue from the railroad by constructing an underpass. The design for the structure was completed in August 191 by L.R. Walker, and the 4th Avenue Underpass was completed in 1916. Twelve years later, city engineer Glenton Sykes designed a similar underpass for 6th Avenue. In May 1930, the city contracted with the Lee Moor Construction Company t build the 6th Avenue Underpass. In 1935, the Arizona Highway Department contracted with M.M. Sundt under Project No. NRM-9 to build a third underpass in the city center, carrying U.S. 89 beneath the railroad at Stone Avenue. Sundt completed the structure in January 1936. All three underpasses remain in unaltered, albeit vandalized, condition and are now scheduled for replacement by the Aviation Corridor highway project.

9. SIGNIFICANCE

Unlike bridges, which were typically located in rural settings, Arizona's urban grade separations were usually designed with consideration of their aesthetic impact. Most featured architectural treatments, either revisionists or modernist intended to integrate the structures within their urban settings. The oldest urban grade separation in the state, the 4th Avenue Underpass features the simplest detailing of the three Tucson underpasses, with paneled concrete parapet walls and link chain guardrails. The 6th Avenue Underpass, with its squashed balusters and bud capitals, has a vaguely Egyptian tone. Finally, the Stone Avenue Underpass displays mainline Mission Style detailing, notable for its prominent curvilinear parapet and arched copings. A prototypical Arizona style, this was an architectural treatment that AHD use for a number of its underpasses. As a group, these three structures well represents this architectural trend. All were determined eligible for NRHP and are now being documented for HAER as mitigation before demolition.

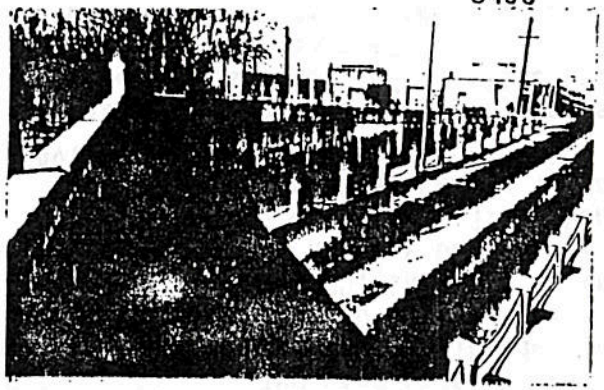
10. NAME(S) OF STRUCTURE

Tucson Underpasses

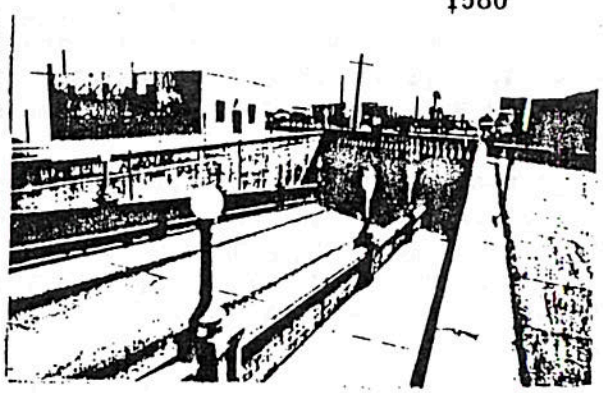
11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM DEPARTMENT OF TRANSPORTATION
GENERAL HIGHWAY MAP

8453



1580



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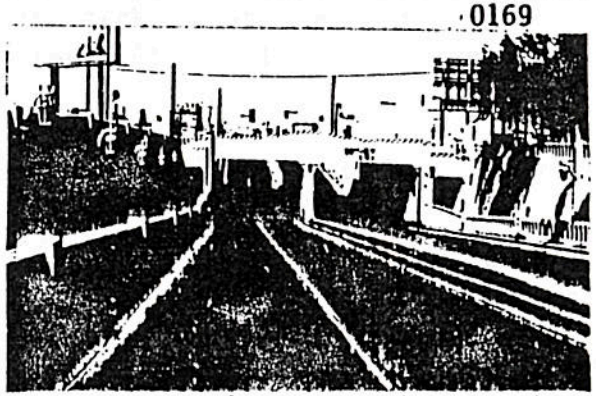

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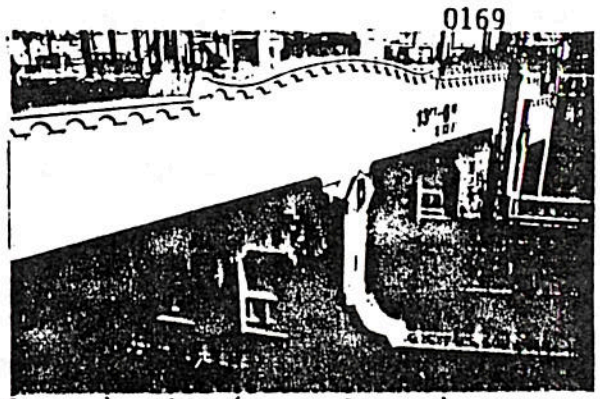

12. SOURCES

Bridge Record, Arizona State Highway System: 8453 (4th Avenue), 1580 (6th Avenue), 0169 (Stone Avenue); Structures Section, Arizona Department of Transportation, Phoenix AZ. .

Original construction drawings for 4th Avenue, 6th Avenue and Stone Avenue underpasses, Structures Section, Arizona Department of Transportation, Phoenix AZ.

"Tucson Continues to Build," Tucson: 6:1939:2.

Arizona Highways: 12:1935:18; 1:1936:19; 2:1936:23.

Field inspection by Clayton Fraser, 22 February 1987.

13. INVENTORIED BY:	**AFFILIATION**	**DATE**
Clayton B. Fraser	Frasersesign Loveland Colorado	1 April 1987

OMB No. 1024-0018

nited States Department of the Interior
ational Park Service

Jational Register of Historic Places
Multiple Property Documentation Form

his form is for use in documenting multiple property groups relating to one or several historic contexts. See instructions in *Guidelines for ompleting National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering e requested information. For additional space use continuation sheets (Form 10-900-a). Type all entries.

. Name of Multiple Property Listing

Vehicular Bridges in Arizona

. Associated Historic Contexts

Vehicular Transportation in Arizona, 1863-1940

. Geographical Data

The State of Arizona

☐ See continuation sheet

. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards for Planning and Evaluation.

Signature of certifying official — Date

State or Federal agency and bureau

I, hereby, certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Signature of the Keeper of the National Register — Date

E. Statement of Historic Contexts

Discuss each historic context listed in Section B.

Bridges, as integral elements of a developing transportation network, have played a pivotal part in the spanning of America. Generally the most sophisticated components of any overland transportation system, from the early primitive territorial roads to transcontinental highways, they are also the most prominent. Bridges serve not only as gauges of technological advancement in design and construction, but as singular indicators of the tenets, values and ambitions of the people who erected them. This is particularly true for Arizona, a state in which overland transportation forms a central historical theme. From the earliest wooden spans on the territorial toll roads to the later steel trusses and concrete arches, bridges have facilitated - and in some instances, created - settlement across the state.

Whether spanning rivers, creeks, draws, arroyos or canyons, bridges have functioned similarly since the first log was thrown across a stream, with differences only in dimensions and capacity. Beyond this, however, the idea soon unravels, as a variety of forms to achieve that function has sprung up through centuries of empirical usage. Bridge types are generally classified by material stone, timber, concrete, iron/steel. The inherent strengths and weaknesses of each tends to dictate its form and usage, as does availability of materials. By the time the country was undergoing initial settlement, most of the principal bridge types and materials had been used or at least experimented with. What remained over the last two centuries has been a process of refinement - a vast refinement to be sure - revolving principally around the introduction and proliferation of structural metals and concrete as building materials.

As recent as America is in terms of bridge development, Arizona is younger still. In the 1840s, when most of the major trusses were invented, Arizona was not even under United States control. When the rest of the country was experiencing what was probably the greatest period of roadway bridge construction in the 1880s and 1890s, Arizona was not a member of the union. When Daniel Luten patented his arch in 1900, Arizona Territory had built only a handful of permanent crossings. And by the time Arizona was admitted as a state in 1912, frankly little was left to develop in bridge technology. Despite this, a number of outstanding bridges have been constructed on Arizona's roads and highways. Fortunately, most of the best of them have survived.

Between 1848, when the Arizona territory was acquired from Mexico by the treaty of Guadalupe, to the Federal Organic Act of February 24, 1863, which designated the Territory after its separation from New Mexico, Arizona was crossed by only two main overland routes. Both traversed the state east-west. Known as the Gila Trail because it largely paralleled the Gila River, the southern route was popular for those rushing to California for gold. The northern route, known as Beale's Road, was used almost entirely by hunters and trappers and the military traveling to California. Other secondary routes - no more than trails, really - developed intermittently by usage, with maintenance, such as it was, performed by users as needed.

After formation in 1863, the Arizona Territorial Assembly immediately recognized the need for transportation routes to connect the widely scattered settlements and foster economic growth. Money for road construction was scarce, however. In 1864, the First Territorial Assembly did what government bodies have traditionally done when short of funds themselves: it authorized others to build roads. Privately held toll companies were given the authority and exclusive right to build and administer toll roads and collect fees based upon predetermined schedules. To raise capital for construction, they were allowed to issue stock, and to protect their sometimes considerable investments, the

[X] See continuation sheet