

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

THEME: Agriculture

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DATE ENTERED

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC Espada Aqueduct and Acequia

AND/OR COMMON

Espada Aqueduct and Acequia

2 LOCATION

STREET & NUMBER Espada Road, just east of U.S. 281S

CITY, TOWN

San Antonio

VICINITY OF

NOT FOR PUBLICATION
CONGRESSIONAL DISTRICT

21st

STATE

Texas

CODE
48

COUNTY
Bexar

CODE
029

3 CLASSIFICATION

CATEGORY

- DISTRICT
- BUILDING(S)
- STRUCTURE
- SITE
- OBJECT

OWNERSHIP

- PUBLIC
- PRIVATE
- BOTH
- PUBLIC ACQUISITION**
- IN PROCESS
- BEING CONSIDERED

STATUS

- OCCUPIED
- UNOCCUPIED
- WORK IN PROGRESS
- ACCESSIBLE**
- YES: RESTRICTED
- YES: UNRESTRICTED
- NO

PRESENT USE

- AGRICULTURE
- MUSEUM
- COMMERCIAL
- PARK
- EDUCATIONAL
- PRIVATE RESIDENCE
- ENTERTAINMENT
- RELIGIOUS
- GOVERNMENT
- SCIENTIFIC
- INDUSTRIAL
- TRANSPORTATION
- MILITARY
- OTHER:

4 OWNER OF PROPERTY

NAME San Antonio Conservation Society

STREET & NUMBER

511 Paseo de la Villita

CITY, TOWN

San Antonio

VICINITY OF

STATE

Texas

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, Bexar County Courthouse
REGISTRY OF DEEDS, ETC.

STREET & NUMBER

South Main Street, 1 block south of Commerce Street

CITY, TOWN

San Antonio

STATE

Texas

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Historic American Engineering Record

DATE

1973

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR
SURVEY RECORDS

Historic American Engineering Record, National Park Service

CITY, TOWN

Washington

STATE

D.C.

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Espada Dam diverts water into the Espada Acequia at a point on the west side of the San Antonio River in the Mission Burial Park, about six miles downstream from the San Antonio business district. The dam has an overall length of approximately 160 feet with a height varying from 6.6 to 8.2 feet. The crest of the dam averages two feet in width, with a bottom width varying from twenty to forty feet. It is composed of flagstone layers placed on a natural ledge across the river. The shape of the dam is unusual, pointing downstream instead of upstream as would a modern arch-gravity dam. The stones have been gradually cemented together by the lime salts of the river water, explaining in part the permanence of the structure.

As originally constructed, the Espada Acequia flowed south from its diversion point across Palo Blanco and Piedras Creeks, passing the Espada Mission on the west. The ditch continued southward to join La Minita Creek, which in turn flowed into the San Antonio River. A smaller acequia, coming directly from the River, ran past the north and west walls of the Espada compound.

The most striking structure on the Espada system is clearly the Espada Aqueduct. Probably built sometime between 1731 and 1745, the sturdy masonry aqueduct continues to carry Espada Acequia water across Piedras Creek, about a mile north of Espada Mission. Two cut stone arches, one 12 feet and the other 16.5 feet in diameter, support the structure. Over the arches and over the abutments at each end, the aqueduct stretches a total of 195 feet. It stands 15.5 feet high at the point where it crosses the creek. Like the Espada Dam, the aqueduct has become cemented together by the lime salts in the water. The mass of the aqueduct was so solid that when its lower section between the arches had become detached from the foundation by erosion, the entire structure remained in position. The aqueduct has withstood the forces of severe floods on Piedras Creek.

The Espada Acequia operated regularly until the 1880's, at which time it fell idle. Then, in 1895, the owners of the water rights along the ditch organized a private company to utilize the irrigation potential of the old acequia. They cleaned, widened, and deepened the ditch, repaired the diversion dam, and made some changes in the course of the canal. At the conclusion of their work, the Espada Acequia had a grade of 18 inches per mile, carried 10 cubic feet per second of water, and irrigated approximately 400 acres of mixed agricultural land. At the end of the last century, farmers on the Espada system were able to grow an average of one bale of cotton per acre, while farmers in the same vicinity who were without irrigation water grew only one-fourth as much. Truck farmers raised all kinds of vegetables "in the greatest profusion" on Espada lands from early spring until first frost.

(Continued)

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input checked="" type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input checked="" type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input checked="" type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1731-1745

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The acequias of San Antonio, constructed during the 18th century, represent the most extensive efforts to supply water by the Spanish in Texas. The new-found engineering principals in the design and construction of diversion dams, canals, and aqueducts gave great efficiency to the system, making the San Antonio area prosperous. The Espada Acequia, constructed between 1731 and 1745 is still in use today, and is one of the best preserved examples of a Spanish acequia. Both the Espada Dam and Aqueduct are also still in operation. The Aqueduct itself is of unique historical significance for it is the only Spanish structure of its type remaining in the United States. Together with the dam and five-mile long acequia this irrigation work illustrates the important role of the Spanish missions in the agricultural history of the Southwest.

HISTORY

The third mission to be moved from East Texas to San Antonio was San Francisco de los Neches, which, in its new site, was renamed San Francisco de la Espada. This mission was located on the west side of the San Antonio River, opposite Mission San Juan. Work began on an acequia at Espada soon after the transfer of the mission to San Antonio.

The course of the Espada Acequia required that its water be transported across Piedras Creek by an aqueduct. It is uncertain when the present aqueduct was built. Less durable aqueducts, consisting of hollowed logs called canoas were used in the early canal systems to span gullies and other canals. Most local historians choose the years between 1740 and Fray Ortiz's visit in 1745 as the probable period for construction. Fray Alto Sebastian Hoermann while serving at nearby Mission San Jose in the 1860's related that the section between the arches had become detached from the foundation, but because of its strength the aqueduct had remained standing.

Use of the Espada Acequia was discontinued in the 1880's, but in 1895 the Espada Ditch Company was organized by A. Y. Walton, Jr., who owned several suertes of land along the acequia, to reactivate the system. The company cleaned, widened, and deepened the ditch and repaired its original diversion dam. It continues to operate the acequia at the present time. The aqueduct and a section of the canal are preserved within Acequia Park.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

(See Continuance Sheet)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY c. 1,090

UTM REFERENCES

A	1,4	55,259,0	3,24,67,3,0
	ZONE	EASTING	NORTHING

B	1,4	55,47,0,0	3,24,13,1,0
	ZONE	EASTING	NORTHING

C	1,4	55,33,9,0	3,24,07,7,0
	ZONE	EASTING	NORTHING

D	1,4	55,11,3,0	3,24,64,3,0
	ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

(See Continuance Sheet)

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Patricia Heintzelman, Architectural Historian, Landmark Review Project

ORGANIZATION

Historic Sites Survey, National Park Service

DATE

5/16/75

STREET & NUMBER

1100 L Street NW.

TELEPHONE

202-523-5464

CITY OR TOWN

Washington

STATE

D.C. 20240

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

Act of 1966 (Public Law 89-665). I

hereby nominate this property for inclusion in the National Register and certify that it has

been evaluated according to the

criteria and procedures set forth by the National Park Service.

Designated: July 19, 1964

date

FEDERAL REPRESENTATIVE SIGNATURE

(NATIONAL HISTORIC LANDMARKS)

Boundary Certified:

TITLE

DATE April 10, 1978

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

W. J. Stutz

DATE

11/29/78

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

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Today the Espada Acequia is approximately four miles long, with an average bottom width of 5 1/2 feet. Its grade is now approximately 23 inches per mile, a slight increase over the 18 inches per mile reported at the end of the last century. This increase may be attributed to the shortening of the section above the aqueduct at least twice in this century. The present flow is approximately 12 cubic feet per second.

The Conservation Society of San Antonio maintains Acequia Park, which contains the Espada Dam and much of the Espada Canal. The Society also maintains ten acres of land containing the old aqueduct. The portion of the river crossed by the Espada Dam was bypassed by a new flood control channel, in an effort to preserve the historic structure and to sustain the water level behind the dam in the Espada Acequia. Unfortunately, the same project caused increased flooding of the aqueduct, which is now severely threatened.

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Holmes, William Henry, "The Acequias of San Antonio," unpublished M. A. thesis, St. Mary's University, San Antonio, Texas, 1962.

Minor, Joseph E., and Steinberg, Malcom L., "A Brief on the Acequias of San Antonio," The San Antonio Branch of the Texas Section, American Society of Civil Engineers, 1968.

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United States Department of the Interior, Geological Survey, "Water Supply and Irrigation Paper No. 13," (Irrigation Systems in Texas by William Ferguson Hutson) Washington, D.C., 1898.

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Wantland, Clyde, The Five San Antonio Missions, San Antonio, 1962.

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The landmark boundary has been drawn to include the Espada Dam, Aqueduct, and Acequia system as well as the Mission San Francisco de la Espada, with which the acequia is intimately connected historically. The Espada System can be seen outlined in red on the enclosed plat maps, sheets 2 & 3 of HAER TX-1, the Acequias of San Antonio, 1973. Beginning at the point where the old river diverges from the flood control canal and going west in a straight line to Mission Road, then south along the east edge of Mission Road to Espada Mission Road, continuing south on Espada Road to its intersection with Chavaneaux Road, then continuing south parallel to the Espada Acequia at a distance of 500 feet to its intersection with Minita Creek, then east 500 feet parallel to the south of the Creek to its intersection with the San Antonio River, then north along the far bank of the San Antonio River continuing around the flood diversion ditch to a point in line with the beginning, then west to that point of beginning.