Form No. 10-300 (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

DATA SHEET

FOR NPS USE ONLY

RECEIVED JUL 3 0 1976

DATE ENTERED DEC 1 2 1976

TE ENTERED UEU 1 6 134

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

1 NAME

AND/OR COMMON

2 LOCATION

STREET & NUMBER

Across Galveston Bay, from Virginia Point on the mainland to Galveston Island.

Galveston	VICINITY OF	CONGRESSIONAL DIS	
STATE Texas	CODE 48	COUNTY Galveston	CODE 167
TORUS	40	Garvescon	101

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRES	ENTUSE
_DISTRICT	PUBLIC	X_OCCUPIED	AGRICULTURE	MUSEUM
BUILDING(S)	X_PRIVATE	UNOCCUPIED	COMMERCIAL	PARK
X_STRUCTURE	ВОТН	WORK IN PROGRESS	EDUCATIONAL	PRIVATE RESIDENCE
SITE	PUBLIC ACQUISITION	ACCESSIBLE	ENTERTAINMENT	RELIGIOUS
_OBJECT	IN PROCESS	X YES: RESTRICTED	GOVERNMENT	SCIENTIFIC
	BEING CONSIDERED	YES: UNRESTRICTED	_INDUSTRIAL	TRANSPORTATION
		NO	MILITARY	_OTHER:

4 OWNER OF PROPERTY

 NAME Bridge is jointly owned by the Galveston, Houston & Henderson Railroad Co., Southstreet & NUMBER ern Pacific Transportation Co., and the Atchison, Topeka and Santa Fe Railway Co.

 CITY. TOWN Galveston
 STATE VICINITY OF

 Texas

 LOCCATION OF LEGAL DESCRIPTION

 COURTHOUSE.

REGISTRY OF DEEDS, ETC. Galveston County Courthouse

STREET & NUMBER

Galveston

STATE Texas

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Texas Historic Engineering Site Inventory

1974	

__FEDERAL X_STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS	History of Engineering Program,	C.E. Dept., Texas Tech University
Lubbock		state Texas

7 DESCRIPTION

CONDITION

EXCELLENT	DETERIORATED
XGOOD	RUINS
FAIR	UNEXPOSED

CHECK ONE <u>X</u>UNALTERED _ALTERED

MOVED DATE_

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Galveston Causeway, as originally built, consisted of earthen embankments on both Galveston Island and Virginia Point ends, 28-reinforced concrete arch spans, and a steel draw bridge. The Causeway stretches a total of 10,675 feet across the bay. Of this distance, 8,219 feet of the Causeway in reality was composed of earthen embankment, 3,969 feet of this embankment was on the Virginia Point end and 4,523 feet was on the Galveston end. The bridge, at time of completion, carried a county highway, electric interurban tracks, and steam railroad tracks.

The arch section of the Galveston Causeway originally consisted of 28-70 foot reinforced concrete arches. Out of these 28 arches, 14 were located on either side of the draw bridge. Each section of 14 arches was divided into two groups of seven each by "abutment piers" measuring 33 feet by 82 feet at the base. All of the piers rested on creosoted wooden pile foundations. The arch section was 66 feet wide and carried the highway, one interurban track, and two railroad tracks.

The Scherzer rolling lift drawbridge on the Galveston Causeway, as completed in 1912, was the largest of its kind in the world. It weighed 3,293,000 pounds, 700 tons of which was in actual steel and the remainder of which consisted of 500 cubic yards of concrete used as a counterbalance. The draw span provided a 100 foot clear opening for the passage of ships in Galveston Bay. The lift was operated by two-50 horsepower motors, furnished with electricity from the interurban line. In addition, there was a storage battery system which powered the lift motors when the electric power source from the interurban line failed. To support the immense weight of the drawbridge a very large concrete pivot-pier was constructed.

Earthen embankments on either end of the concrete arch spans, which in 1912 composed the greatest part of the structure, were in effect simple earthen berms protected by concrete slabs and retained by walls of concrete sheet piling. The reinforced concrete sheet piles for retaining the fill were 10 inches thick, 18 inches wide, and 18 to 25 feet long. The concrete piles were reinforced with steel and cast with tongue and groove designs on their sides to make a solid wall when driven into the bottom of the bay. All of the concrete sheet piles were cast at the construction camp at the island end of the bridge. The earthen fill for the embankments was moved to the side by hydraulic-fill techniques using dredges and large centrifugal pumps. The embankment sections of the original causeway were 154 feet wide and carried the two-lane county highway, two interurban tracks, and two railroad tracks with space for the future addition of two more railroad tracks. Form No. 10-300a (Rev. 10-74)

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CONTINUATION SHEET

ITEM NUMBER 7 PAGE 2

After the Galveston Causeway was dedicated on May 25, 1912, it served for three years until it was severely damaged and placed temporarily out of commission by the August 1915 Galveston Hurricane. This was the first severe tropical storm to hit Galveston after the devastating 1900 storm in which several thousand residents were killed. In the 1915 storm the central portions of the causeway, the concrete arch and steel draw sections, survived with only slight damage. However, the earthen embankment sections were almost entirely destroyed when the earth fill washed away in the wind and water.

In late 1917, reconstruction work began on the Galveston Causeway. In the work which followed most of the original earthen embankments were replaced with concrete arches similar to the one which had successfully withstood the storm, thus making the Galveston Causeway the continuous arched bridge which is familiar today. As completed in 1922, the reconstructed causeway contains 51 arches on the Virginia Point end and 28 arches on the Galveston Island end. The bridge remains in this basic condition and today continues to carry railway traffic from the mainland to Galveston, and vice-versa. The county highway, no longer sufficient to carry the increased automobile traffic, is currently used as a railroad service road.

8 SIGNIFICANCE

PREHISTORIC	ARCHEOLOGY-PREHISTORIC	COMMUNITY PLANNING	LANDSCAPE ARCHITECTURE	RELIGION
_1400-1499	ARCHEOLOGY-HISTORIC	CONSERVATION	_LAW	SCIENCE
_1500-1599	AGRICULTURE	X_ECONOMICS	LITERATURE	SCULPTURE
1600-1699	ARCHITECTURE	EDUCATION	MILITARY	XSOCIAL/HUMANITARIAN
_1700-1799	ART	XENGINEERING	MUSIC	THEATER
_1800-1899	X_COMMERCE	EXPLORATION/SETTLEMENT	PHILOSOPHY	XTRANSPORTATION
X1900-	X_COMMUNICATIONS		POLITICS/GOVERNMENT	OTHER (SPECIFY)

of foot reined out concer to and it whit or and oil suchous. You appresses

May 25, 1912.

BUILDER/ARCHITECT Engineering Co., New York. Con-

STATEMENT OF SIGNIFICANCE

crete and earth portion built by A.M. Blodgett Construction Co., Kansas City, Mo. Steel draw ocs to here the story that span built by Penn Bridge Co., Beaver Falls, Penn.

on the raise and a short of the second and an the second of the Constructed by the County of Galveston and a consortium of private railway companies in 1909-1912, the Galveston Causeway was the first successful and bridge to span Galveston Bay and represents the first reliable transportation and communications link with the mainland. The 1912 Causeway has helped to integrate insular life at Galveston with that of the mainland siche its construction and has provided the people of Galveston with a constant supply of fresh water via the 30-inch water main safely encased within the concrete causeway. (The 1900 hurricane had destroyed this valuable lifeline and the city was without fresh water for several days.). Thus the 1912 Causeway was a welcomed and appreciated addition to Galveston. In 1912, Galveston was one of the South's major ports and the central distributing point for an enormous district in the West and Southwest. But only one single-track trestle bridge connected the city with the mainland, thereby greatly restricting commerce. However, the new causeway, with room for six standard gauge railroad tracks, two electric interurban tracks (with room for two more), and a 40-foot wide county road served to alleviate the transportation and communications problem and gave an impetus to commerce and industry that was far-reaching in its effect. The importance of Galveston as a port and trade center was maintained. The completion of the 1912 Galveston Causeway prevented commercial repercussions which would have been felt at the national level. Likewise, the economic status of Galveston and of the State of Texas was much enhanced by the increased flow of transportation and communications which had a direct impact upon the expansion of commerce and industry. While it is true that other causeways of the type found at Galveston were erected along the Gulf Coast, none of these were so important to the welfare of the city and state which they served as was the Galveston Causeway. The Galveston Causeway was also unique in that the Scherzer rolling lift bridge built at its center to give clear passage to ships was, in 1912, the largest structure of its kind in the world. The 1912 Causeway stands as a tribute to the people of Galveston in their recovering from a seemingly hopeless situation following the hurricane of 1900.

Constructed in 1909-1912, the Galveston Causeway has since that time been in constant use except for a period between 1915 and 1922 when portions of the

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CONTINUATION SHEET

ITEM NUMBER 8

PAGE 2

Causeway, the earthen approaches, were washed out by a storm in 1915. For two years the Galveston Causeway remained inoperable. The intact concrete and draw sections mockingly stood by themselves in the center of the bay. A temporary wooden railway trestle, hastily erected, served as the only link to the mainland. Reconstruction work on the Galveston Causeway continued from late 1917 to early 1922 at which time the structure returned to normal service. Since 1922 the Causeway has served with only brief interruptions as a continuous link between the city and county of Galveston and the mainland of Texas.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Baker, T. Lindsay. "Old Causeway Has Served as Near-Continuous Link with Mainland." The Galveston Daily News (Galveston, Texas), August 11, 1974, Sec. B, pp. 1, 11.

"The Construction of the Galveston Causeway." Engineering Record, LXIII, No. 21 (May 27, 1911), pp. 576-578.

"The Galveston Causeway." Engineering Record, LXII, No. 6 (October 15, 1910), pp. 424-426.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY <u>Approx</u>. <u>39 acres</u>. UTM REFERENCES

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C 115 311561010	312 412 81910	D		Lulu
VERBAL BOUNDARY DESCRI	PTION			The second second second second second

VERBAL BOUNDARY DESCRIPTION

The Galveston Causeway, as nominated, includes the 10,642' long concrete arch viaduct across Galveston Bay and its approaches and abutments. The Scherzer rolling lift bridge, an integral part of the Causeway, is also included. The Galveston Causeway connects Galveston Island with Virginia Point on the main-land.

				UNTY BOUND	
STATE	CODE	COUNTY	0.1-0 0.0		CODE
STATE	CODE	COUNTY	page-dear N		CODE
FORM PREPARED BY					
Murray R. Arrowsmith	n,		Research 4	ssociate	
ORGANIZATION History of Enginee	ring Program	n	April 5,	.976	
STREET & NUMBER P.O. Box 4089	· · · · · · · · · · · · · · · · · · ·	and the second second	(806) 742-	PHONE -1313	- Charpener
CITY OR TOWN Lubbock		11 0	Texas	E	lan ⁱⁿ
STATE HISTORIC PRES	ERVATIO	N OFFICE	R CERTIFI	CATION	Lovel
THE EVALUATED S	IGNIFICANCE OI	F THIS PROPERT	Y WITHIN THE ST	ATE IS:	TOPE
NATIONAL	STA	TE	LOCA		
As the designated State Historic Preservation hereby nominate this property for inclusion criteria and procedures set forth by the Nation	in the National	Register and cert		evaluated ad	cording to the
STATE HISTORIC PRESERVATION OFFICER SIGN	ATURE	mell	journ	1	-26-76
	ATURE	SHI	DA DA	V	- 26-76
STATE HISTORIC PRESERVATION OFFICER SIGN	1	SHP SHP	0	re 17/	1. 14

GPO 892.453

Property al montos ausen Working Number 11.11. 75 2030 State CONTROL TECHNICAL acreage missing Photos Maps 3,75 eligible but no statement S. HISTORIA cance & no indication on map of how much of the cause way is Re nomina ARCHITECTURAL HIS Section 8 minimal - may acrease an insufficient Maps RETUR ARCHE **OTHER** Significance is a bit thin. HAER Inventory T.L. Baker Netura Review **REVIEW UNIT CHIEF** Return Cole 2/23/26 **BRANCH CHIEF KEEPER** Send-back 3.11.76 National Register Write-up Entered _ Re-submit 7.30.76 Federal Register Entry INT:2106-74 United States Department of the Interior National Park Service WASO No. 7

ntrol sheet Property rlueston Cau Working Number State 1.11.75. 2030 TECH Photos _ Maps Bridge surface is 16 acres so 39 may not be Excessive, but a verbal boundary description and an accurate map are needed. Figures don't HISTORIAN add up, MAP IS IMPROPERLY MARKED, ACREAGE SEEMS ARCHITECTURAL HISTORIAN EXCESSIVE, FIGURES DO NOT HOD UP. RETURN), CALL AFTER REVIEW betieves? BY HAER 10.8.76 Paul LEBOUKIA averenthant ARCHEOLOGIST inpos **OTHER** >HAER Inventory Review accept **REVIEW UNIT** CH CHIEF KEE National Register Write-up Send-back Entered 2-1-17 Federal Register Entry Re-submit ____ INT:2106-74 United States Department of the Interior National Park Service WASO No. 7



Galveston Causeway Galveston County Galveston, Texas

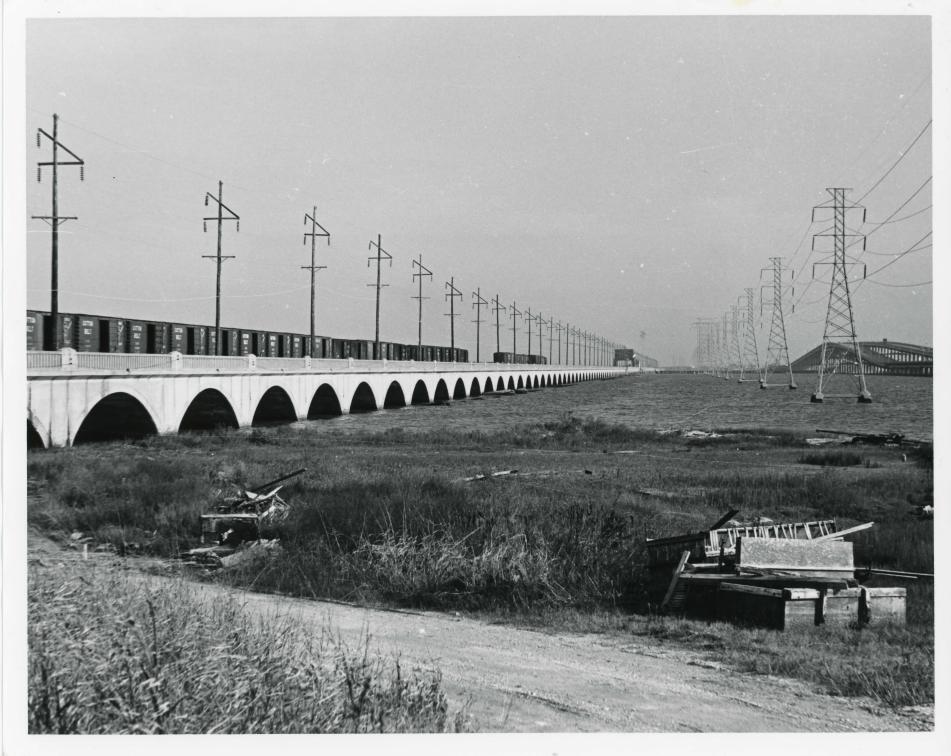
JUL 30 1975

History of Engineering, History of Engineering Program, Texas Tech University January 1973 Northeast beneath northwestern most arch of the Galveston Causeway showing Galveston Bay in the background.

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DEC 12 1976

PROPERTY OF THE MATICINA REGI



Galveston Causeway Galveston County Galveston, Texas History of Engineering, History of Engineering Program, Texas Tech Univ. January 1973 Southeast along the former county highway pportion of the Galveston Causeway from the Virginia Point (Northwest) end of the structure. The modern highway causeway is at the right side of the photograph.

2 4

DEC 1 2 1976

PROPERTY OF THE NATIONAL REGISTER



Galveston Causeway Galveston County Galveston, Texas History of Engineering Program, May 1973 Full view of the Galveston Causeway southeast from Virginia Point.

344

DEC 1 2 1976

PROPERTY OF THE NATIONAL REGISTER



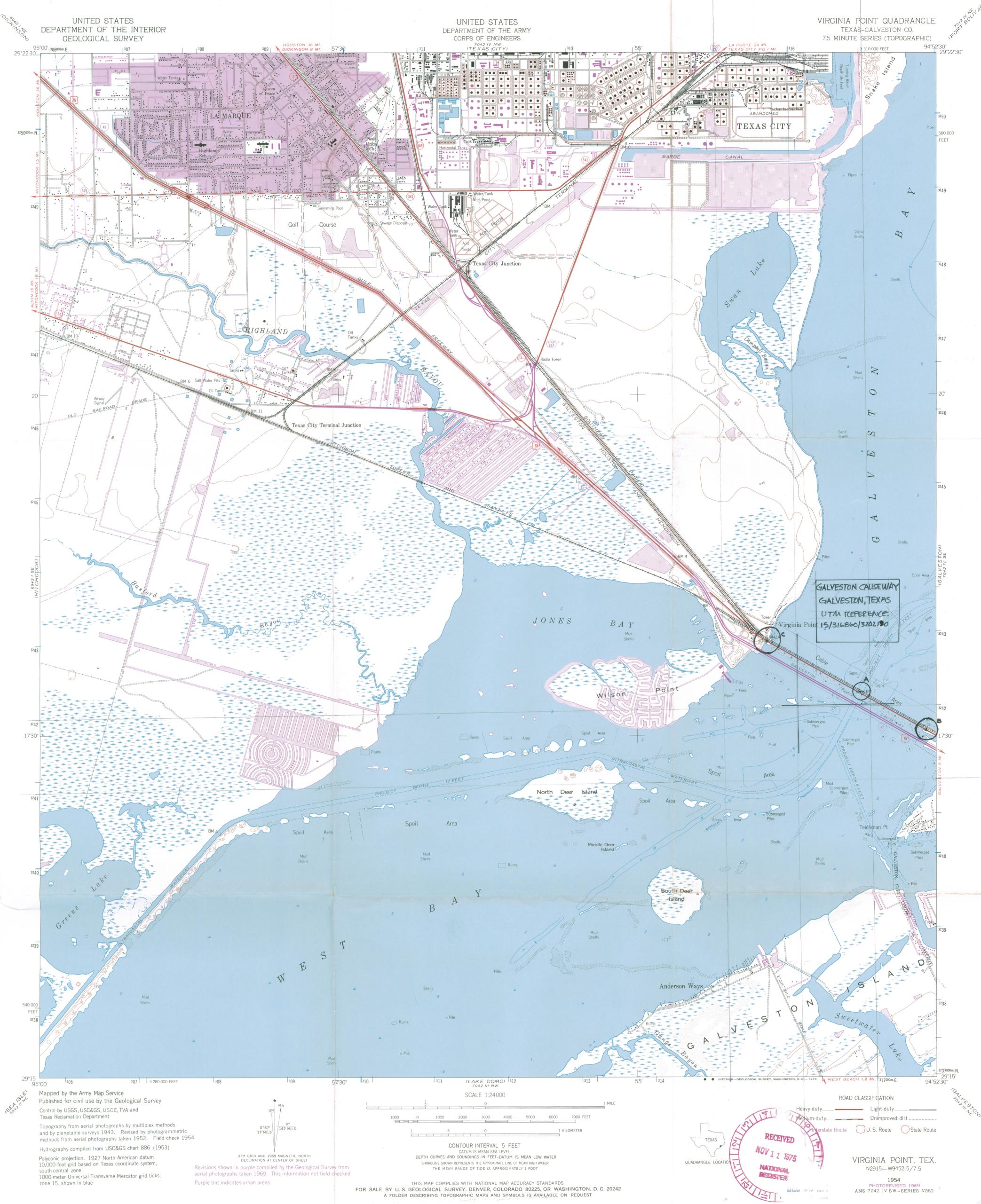
JUL 30 1976

Galveston Causeway Galveston County Galveston, Texas Rosenbery Library, Galveston, Texas, History of Engineering Program, Texas Tech University, 1912 Dedication of the Galveston Causeway in 1912

4 mg 4

DEC 1 2 1976

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ENTRIES IN THE NATIONAL REGISTER

	STATE	TEXAS				
Date	Entered	DEC 12 1976				

Name

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Location

Menard, Michel B., House

Galveston Causeway

St. Joseph's Church

Stage Coach Inn

Giddings-Wilkin House

Regency Suspension Bridge

Bell County Courthouse

Galveston County

Galveston Galveston County

Galveston Galveston County

Chappell Hill Washington County

Brenham Washington County

Regency vicinity Mills County

Belton Bell County

Also Notified

Hon. John G. Tower Hon. Lloyd M. Bentsen Hon. Jack Brooks Hon. J. J. (Jake) Pickle Hon. W. R. Poage Regional Director, Southwest Region State Historic Preservation Officer Mr. Truett Latimer Executive Director Texas Historical Commission P.O. Box 12276, Capitol Station Austin, Texas 78711

880 MMott/row 12/14/76

others -

BRYAN CARNEGIE LIBRARY Owner:



Ustab

PENDING.

4

City of Bryan A Mayor and City Officials Bryan, Texas 77840

ADOLPHUS STERN HOUSE Owner: City of Nacogdoches Mayor and City Officials Nacogdoches, Texas 75961

TURKEY ROOST PETROGLYPHS Owner: Pleas Childress

> P. O. Drawer K Ozona, Texas 76943

TAX REFORM ACT MAR 15 1977

GALVESTON CAUSEWAY Owner:

erby

LASTED

County of Galveston Galveston County Courthouse, 722 Moody St. Galveston, Texas 77550

^L NATIONA			DATA	SI	HEET
INAME as it appears on federal register	er: 20	THER NAMES:		(3	date of entry: 4 county code:
()Galveston Causeway					12-12-76 167
5 LOCATION street & number	city / town	vicinity of		ounty	ONPS REGION:
* see reverse	Galveston		TX Galves		Southwest
OWNER APRIVATE DISTATE DMUNICIPAL DCOUNTY DM	ULTIPLE DEEDBERAL (agency name)		®A	DMINISTRATO	OR:
(9) EXISTING SURVEYS CHABS CHAER CHAER OF UNDE	D? DYES DNO DONGRESS. DIST	RICT 9th Desour	CE of NOMINATION		
WITHIN HATIONAL REGISTER HISTORIC DISTRICT?	TAN UTTER MATIONAL HISTORIC LA	NDMARK ?	X approx. 39		te who prepared form? SHPO IL PRIVATE ORGANIZATION
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ART-5 DUCATION-10	NVENTION - 14 DHILOSOPHY - 20	K TRANSPORTATION-2		5 -	
Bunctions	æ	dates of initial constructio	1909-12		ETHNIC GROUP ASSOCIATION
WHEN HISTORICALLY SIGNIFICANT: Bridge		major alterations :	1909-112		ASSOCIATION
CURRENTLY: Bridge		historic events:			
architectural style(s):	marchitect	:	master builder:		engineer:
9	No.		0		* see reverse
Dandscape architect/garden designer:	minterior decorator	artist:	martisan:	huilder	/contractor:
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NAMES give role & date PERSONAL: EVENTS:					
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FUL BRIDGE TO SPAN GALVEST	N Part,				
					the second s
reviewers initials BEOFF date 6. 14.77		DITIONAL SPACE NEEDE			

* (5) location - Across Galveston Bay, from Virginia Point on the mainland to Galveston Island.

Spans

* (29) engineers - designed by the Concrete Steel Engineering Co., N.Y., concrete and earth portion built by A.M. Blodgett construction Co., Kansas City, MO, steel draw span built by Penn Bridge Co., Beaver Falls, PA.