NPS Form 10-900 OMB No. 1024-0018

# **United States Department of the Interior** National Park Service

# **National Register of Historic Places Registration Form**

1. Name of Property			
Historic Name: State Highway 16, Brazos River Bridge Segment Other name/site number: SH 16 from Brackeen Drive to SH 254 Name of related multiple property listing: Historic Road Infrastructure of Texas MPS			
2. Location			
Street & number: SH 16 from 7.4 miles northeast of US Highway 1 City or town: Graford State: Texas County: Palo F Not for publication: □ Vicinity: ☑			
3. State/Federal Agency Certification			
As the designated authority under the National Historic Preservation Act, as amer nomination request for determination of eligibility meets the documentation National Register of Historic Places and meets the procedural and professional reopinion, the property reference does not meet the National Register criteria.	standards for registering properties in the equirements set forth in 36 CFR Part 60. In my		
□ national ☑ statewide □ local	olgrimodrioc.		
Applicable National Register Criteria: ☑ A ☐ B ☑ C ☐ D			
State Historic Preservation Of Signature of certifying official / Title  Texas Historical Commission State or Federal agency / bureau or Tribal Government	ficerDate		
In my opinion, the property □ meets □ does not meet the National Register crite	eria.		
Signature of commenting or other official	Date		
State or Federal agency / bureau or Tribal Government			
4. National Park Service Certification			
I hereby certify that the property is:  entered in the National Register determined eligible for the National Register determined not eligible for the National Register removed from the National Register other, explain:			
Signature of the Keeper	Date of Action		

### 5. Classification

### **Ownership of Property**

	Private
	Public - Local
Χ	Public - State
	Public - Federal

### **Category of Property**

	building(s)
	district
	site
Х	structure
	object

### **Number of Resources within Property**

Contributing	Noncontributing	
0	0	buildings
0	0	sites
19	6	structures
0	0	objects
19	6	total

Number of contributing resources previously listed in the National Register: None

### 6. Function or Use

Historic Functions: Transportation: Road-related

**Current Functions:** Transportation: Road-related

## 7. Description

Architectural Classification: Other - Rustic Style

Principal Exterior Materials: Limestone, Reinforced concrete, Asphalt

Narrative Description (see continuation sheets 8 through 11)

#### 8. Statement of Significance

#### **Applicable National Register Criteria**

X	Α	Property is associated with events that have made a significant contribution to the broad patterns of our history.
	В	Property is associated with the lives of persons significant in our past.
X	С	Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
	D	Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations: NA

Areas of Significance: Transportation, Engineering

Period of Significance: 1940-1963

Significant Dates: NA

**Significant Person** (only if criterion b is marked): NA **Cultural Affiliation** (only if criterion d is marked): NA **Architect/Builder:** Texas Highway Department (THD)

Narrative Statement of Significance (see continuation sheets 12 through 22)

#### 9. Major Bibliographic References

**Bibliography** (see continuation sheets 23 through 26)

#### Previous documentation on file (NPS):

- \_ preliminary determination of individual listing (36 CFR 67) has been requested.
- \_ previously listed in the National Register
- \_ previously determined eligible by the National Register
- \_ designated a National Historic Landmark
- \_ recorded by Historic American Buildings Survey #
- \_ recorded by Historic American Engineering Record #

#### Primary location of additional data:

- **x** State historic preservation office (*Texas Historical Commission*, Austin)
- \_ Other state agency
- \_ Federal agency
- \_ Local government
- University
- <u>x</u> Other -- Specify Repository: TxDOT Environmental Affairs Division, 118 East Riverside Drive, Austin, Texas 78701

Historic Resources Survey Number (if assigned): NA

### 10. Geographical Data

Acreage of Property: Approximately 120 acres

Coordinates:

Latitude/Longitude Coordinates: WGS84 Datum

1. South Limit: 32.836191° -98.428946° 2. North Limit: 32.927631° -98.374671°

**Verbal Boundary Description:** (see continuation sheet 27)

**Boundary Justification:** (see continuation sheet 27)

### 11. Form Prepared By

Name/title: Maryellen Russo (Historian), Alexis Reynolds (Historian), and Rebecca Lapham (Historian)

Organization: Blanton & Associates, Inc. for the Texas Department of Transportation

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City or Town: Austin State: Texas Zip Code: 78701

Email: Renee.Benn@txdot.gov Telephone: 512-416-2628 Date: March 4, 2013

#### **Additional Documentation**

Maps (see continuation sheet 29 through 37)

**Additional items** (see continuation sheets 38 through 45)

### **Photographs**

State Highway 16

SH 16 from 7.4 miles northeast of US Highway 180 to SH 16/SH 254 intersection

Graford vicinity, Palo Pinto County, Texas

Photographed by Maryellen Russo, 2011

Photograph 1

Southern limit of the SH 16 historic road corridor, facing south toward Brackeen Drive.

This section was widened in 2003.

Photograph 2

Southern limit of the SH 16 historic road corridor, facing north. This section was widened in 2003.

Photograph 3

Representative contributing small culvert (Resource No. 1A) with embankment stabilization, facing east.

Stabilization occurred after the period of significance.

Photograph 4

Representative contributing small culvert (Resource No. 1B), facing west.

Photograph 5

Representative contributing mid-size culvert (Resource No. 1C), facing west.

Photograph 6

Representative contributing large culvert (Resource No. 1E), facing east.

Photograph 7

Representative contributing small culvert (Resource No. 1K) with roughhewn stone and mortar, facing west.

Photograph 8

Brazos River Bridge (Resource No. 1M) south approach, facing north.

Photograph 9

Downstream side of Brazos River Bridge (Resource No. 1M), facing west.

Photograph 10

Downstream side of bridge (Resource No. 1M), facing northwest.

Photograph 11

Upstream side of Brazos River Bridge (Resource No. 1M), facing northeast.

Photograph 12

Representative detail of the bridge's arches, facing west.

Photograph 13

Representative detail of the underside of an arch.

#### Photograph 14

Representative detail of pier, facing north.

#### Photograph 15

Character-defining northwest wingwall of bridge, facing north.

#### Photograph 16

Character-defining northeast wingwall of bridge, facing north.

#### Photograph 17

Non-character-defining northeast wingwall extension that parallels SH 16, facing east.

#### Photograph 18

Road at north approach to Brazos River Bridge (Resource No. 1M), facing southwest.

#### Photograph 19

Road north of the Brazos River Bridge, facing south; the Possum Kingdom Fish Hatchery is on the right.

#### Photograph 20

Representative concrete pipe culvert, facing northeast.

#### Photograph 21

Beginning of guard wall (Resource No. 1R) north of the bridge, south end of Kimberlin Mountain, facing northeast.

#### Photograph 22

Single crenellation (Resource No. 1R) along road, facing northeast.

#### Photograph 23

Missing crenellation on the guard wall (Resource No. 1R) along road, facing southeast.

Date of alteration unknown

#### Photograph 24

Replaced crenellation on the guard wall (Resource No. 1R) along road, facing west.

### Photograph 25

Guard wall (Resource No. 1R) on Kimberlin Mountain, facing southwest.

#### Photograph 26

Curve of road and guard wall (Resource No. 1R) north of the river at Kimberlin Mountain, facing south.

#### Photograph 27

Repaired crenellation on the guard wall (Resource No. 1R) along road, facing north.

#### Photograph 28

Northern limit of guard wall (Resource No. 1R) on Kimberlin Mountain, facing southeast.

#### Photograph 29

Representative noncontributing culvert (Resource No. 1U), facing east. Culvert widened c. 1985.

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National Park Service / National Register of Historic Places REGISTRATION FORM
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#### State Highway 16, Brazos River Bridge Segment, Graford vicinity, Palo Pinto County, Texas

#### Photograph 30

Interior of noncontributing culvert (Resource No. 1U) showing original masonry section and widened concrete sections, facing west. Culvert widened c. 1985.

#### Photograph 31

Road north of bridge and south of Park Road 36, showing the 1942 original 22-foot-wide road profile, facing south.

#### Photograph 32

Intersection of SH 16 and Park Road 36, showing the 1942 original 22-foot-wide roadway in the background and the c. 2000 altered 26-foot-wide road in the foreground, facing south

### Photograph 33

Northern limit of the SH 16 historic road corridor at intersection with SH 254, facing west. The nominated segment begins at the striped median.

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement**: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

#### Summary

The nominated 8.4-mile segment of SH 16 is located in Palo Pinto County, Texas. It is east of Possum Kingdom Lake, north of the town of Brad, and west of the town of Graford. The nominated section of SH 16 extends from Brackeen Drive to SH 254. Constructed between 1940 and 1942, the 8.4-mile segment was part of a larger 27.75-mile-long WPA project. The roadway provided an all-weather transportation facility between the eastern side of Possum Kingdom Lake, US 180 to the south of the lake, and US 281 east of the lake in northwestern Palo Pinto County. The nominated segment of SH 16 winds through a rural area characterized by hills and valleys and scattered ranches and wooded areas. The two-lane roadway exhibits superior masonry workmanship in its culverts, guard wall, and the masonry arch bridge over the Brazos River. With only minor roadway widening and damage to some of the masonry components, the nominated segment of SH 16 and its contributing masonry features retain a high level of integrity of location, design, setting, materials, workmanship, feeling, and association.

#### **Current Condition**

The nominated segment of SH 16 extends from the present-day Brackeen Drive, approximately 7.4 miles northeast of US 180 and the town of Brad, to the intersection of SH 16 and SH 254. This segment of SH 16 is approximately 8.4 miles in length and runs north-to-south on the east side of Possum Kingdom Lake. The road is located in the northern Texas Hill Country, an area characterized by rocky hills and canyons. The southern portion of the nominated roadway crosses the Brazos River Valley. Because of the rocky terrain and mesa formations, the area is dominated by rangeland with some wooded areas on slopes and in canyons.

The nominated SH 16 roadway segment extends generally in a northern direction beginning at its southern limit at the present-day SH 16 and Brackeen Drive intersection. As it progresses northward through a densely vegetated area, the road descends approximately 300 feet in elevation to the Brazos River (Photographs 1 and 2). At the Brazos River, a 433-foot-long masonry arch bridge carries SH 16 over the river (Photographs 8 through 18). North of the river, the road winds past the Possum Kingdom Fish Hatchery (built in 1949) and Red Bluff Drive, which provides downstream access to the Morris Sheppard Dam and power plant.

As the road continues north it ascends a steep hill locally known as Kimberlin Mountain (named for an adjacent land owner), rising approximately 115 feet in elevation in 0.5 mile. A sharp curve is located near the top of Kimberlin Mountain, and a masonry guard wall lines the outside edge of the roadway from the base to the top of Kimberlin Mountain (Photographs 21 through 28). North of Kimberlin Mountain, SH 16 intersects with Farm-to-Market Road (FM) 2353, which leads to the Brazos River Authority (BRA) Possum Kingdom headquarters. The SH 16 roadway straightens on the north side of Kimberlin Mountain and extends through rangeland and scattered wooded areas. As the road progresses northward, it intersects with Park Road (PR) 36 and continues past open fields and scattered residences constructed from the 1940s to the present (Photographs 31 and 32). The nominated segment's northern limit terminates at the Y-intersection with SH 254 (Photograph 33). Outside of the 8.4-mile nominated segment, SH 16 continues northwest towards Graham (Young County), and SH 254 progresses in a roughly easterly direction toward the town of Graford (Palo Pinto County).

The typical public ROW associated with the SH 16 nominated segment is 100 to 120 feet wide. The two-lane rural highway also has three different pavement widths (see Figure 1 for existing typical sections of the SH 16 roadway). The 1.75-mile section of SH 16 from Brackeen Drive to 1,200 feet south of the Brazos River Bridge is 32 feet wide and contains two 12-foot-wide travel lanes with 4-foot-wide shoulders. The 4.4-mile section of SH 16 from 1,200 feet south of the Brazos River Bridge to PR 36 is approximately 22 feet wide and contains two 11-foot-wide travel

lanes with no shoulders. The 2-mile section of SH 16 from PR 36 to SH 254 has a variable width of approximately 32 to 36 feet and contains two 12-foot-wide travel lanes with 4- to 6-foot-wide shoulders. <sup>1</sup>

#### Description of Resources along SH 16

Resources within the nominated portion of SH 16 include Depression-era masonry culverts, a masonry guard wall, the masonry arch bridge carrying SH 16 over the Brazos River, and 1960s-constructed reinforced concrete pipe culverts. There are a total of 24 resources located along the SH 16 roadway. These include 21 masonry culverts, one masonry guard wall, one masonry arch bridge, and a system of reinforced concrete pipe culverts (noted as one resource for the purposes of this nomination). There are 18 contributing resources: 16 masonry culverts, the masonry guard wall, and the masonry arch bridge. Noncontributing resources include five widened masonry culverts and the reinforced concrete pipe culverts. See Table 1 for a list of resources and their designation as contributing and noncontributing.

Masonry Culverts (16 contributing structures; 5 noncontributing structures)

The 21 masonry culverts are box culverts constructed of locally-quarried, rough-hewn limestone blocks square-cut in a variety of sizes and arranged in a coursed pattern (Resource Nos. 1A-1L, 1N-1P and 1S through 1X). The culverts' substructures consist of stone abutments and stone wingwalls. Reinforced concrete slab decks serve as the superstructures atop the masonry substructures. Thick mortar between the stone displays varying amounts of detail. A majority of the culverts exhibit mortar tooled into concave joints on the headwalls. Some of the larger culverts carry this detailing onto the abutment walls (such as Resource Nos. 1F, 1G, and 1H). The generous use of mortar and subtle joint details evoke a rustic quality that mimics the surrounding landscape, a common construction technique in the Depression era and most often used by the National Park Service (NPS).

Ca. 1985, TxDOT widened five of the 21 masonry culverts (Resource Nos. 1P, 1S, 1T, 1U, and 1V) on both sides with reinforced concrete box extensions (see Photographs 29 and 30). The masonry wingwalls on those culverts are no longer extant, and masonry details are only visible several feet inside the culvert. These five widened culverts, which are all located north of the Brazos River, are noncontributing resources. The remaining 16 masonry culverts (Resource Nos. 1A-1L, 1N-1O, 1W, and 1X) are contributing resources to the SH 16 roadway. They are in their original condition, have not been widened with concrete extensions, and retain their masonry abutments and wingwalls.

Masonry Guard Wall (contributing structure)

An approximately 1,800-foot-long masonry guard wall (Resource No. 1R) is located on Kimberlin Mountain (see Photographs 21 through 28). The masonry wall consists of a 2-foot-tall horizontal wall with consistently spaced 4-foot-tall vertical elements or crenellations. Only the vertical elements are present in the sections where the road is not curved (see Photographs 22 and 28). Both the horizontal and vertical elements of the masonry guard wall feature local, rough-hewn limestone blocks cut in varying sizes and arranged in a coursed pattern (see Photographs 21, 22, 25, and 26). In keeping with the rustic design aesthetic of the masonry culverts, the guard wall exhibits thick mortar and tooled, concave joints. The masonry guard wall is damaged in several places, largely due to vehicles hitting it. Of the 129 original vertical elements or crenellations, 41 are either missing (Photograph 23), replaced

<sup>&</sup>lt;sup>1</sup> The as-built plans show that THD constructed SH 16 as a 20-foot-wide roadway (10-foot travel lanes and no shoulders). THD (currently TxDOT) widened the roadway over time. The 1.75-mile section south of the Brazos River was widened in 2003, the 4.4 mile section to PR 36 appears to have been widened in 1963, and the 2-mile section to SH 254 was widened ca. 1985.

with new stone work and mortar (Photograph 24), or repaired with new mortar (Photograph 27). The remaining 88 guard wall crenellations remain unaltered and in their original condition. The masonry guard wall is a contributing resource to the nominated SH 16 segment.

Stone Arch Masonry Bridge (contributing structure)

The most significant masonry feature is the masonry bridge carrying SH 16 over the Brazos River (Photographs 8 through 18). It is an 18-span, closed spandrel, earthen-filled, masonry Roman-arch bridge with a concrete slab superstructure. The bridge is 433 feet and 4 inches long with two 11-foot-wide travel lanes, no shoulders, and a total deck width of 25 feet (from outside of curb to outside of curb). The bridge has a limestone masonry substructure with spread footings and masonry bent caps. The voussoir arches with keystones taper to stone piers that vary between 3 feet and 5 feet wide and sit on bedrock foundations. The arch spans vary between 23 and 30 feet long. Like the other masonry features, the bridge is constructed of irregularly sized squared blocks arranged in a coursed pattern with concave mortar joints. A solid panel concrete railing with drainage holes rests atop the concrete slab deck and flanks the travel lanes. Reinforced concrete bars (rebar) integrally connect the solid panel railing and portions of the deck with the masonry arches. As a result, the superstructure and substructure act as one unit, and the deck cannot dislodge from the masonry arches during flood events. Large masonry wingwalls and retaining walls are at each corner of the bridge. Although TxDOT maintenance forces have added concrete to help stabilize the masonry wingwalls, the masonry features on the wingwalls are still visible (see Photographs 15 and 16). At the northeast corner of the bridge, a portion of the wingwall extends northward from the bridge and parallels the SH 16 roadway. This wall is damaged (likely from passing vehicles), and portions of the wall are missing (Photograph 17). Nevertheless, the bridge itself is a contributing resource to the SH 16 roadway.

Reinforced Concrete Pipe Culverts(small features not counted separately)

Built in 1963 as part of a TxDOT drainage upgrade and minor widening project, a system of reinforced concrete pipe culverts are located north of the river along the nominated segment of SH 16 (grouped together as one resource – Resource No. 1Q).<sup>2</sup> Unlike the masonry culverts, the reinforced concrete pipe culverts are standardized, prefabricated culverts. The reinforced concrete pipe culverts are cylindrical units no larger than approximately three feet in diameter. They have concrete wingwalls and no masonry components (Photograph 20). These culverts are noncontributing resources to the nominated SH 16 segment, but are not counted individually as structures due to their small size.

**Table 1: SH 16 Nominated Segment Resources** 

Resource Number	Resource Type	Construction Date(s)	Alterations (if applicable) and Alteration Date	Status	Location
1	Roadway	1940-1942	Minor widening (1963, 2004, 2007)	С	Brackeen Drive to SH 254
1A	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1B	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1C	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1D	Masonry box culvert	1940-1942	None	С	South of the Brazos River

<sup>&</sup>lt;sup>2</sup> The 1963 widening of SH 16 increased the roadway from a 20-foot-wide roadway (per THD as-built plans) to a 22-foot-wide roadway, which added one foot to each travel lane.

**Table 1: SH 16 Nominated Segment Resources** 

Resource Number	Resource Type	Construction Date(s)	Alterations (if applicable) and Alteration Date	Status	Location
1E	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1F	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1G	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1H	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1I	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1J	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1K	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1L	Masonry box culvert	1940-1942	None	С	South of the Brazos River
1M	Masonry arch bridge	1940-1942	None	С	Crossing the Brazos River
1N	Masonry box culvert	1940-1942	None	С	South of Red Bluff Drive
10	Masonry box culvert	1940-1942	None	С	South of Red Bluff Drive
1P	Masonry box culvert	1940-1942	Widened (ca. 1985)	NC	North of Red Bluff Drive
1Q	Representative concrete pipe culvert	1963	None	NC; These small features are not counted individually.	North of Red Bluff Drive
1R	Masonry guard wall	1941-1942	Some missing and damaged sections, several repairs and replacements since its initial construction (damage and repairs made at various dates since the wall's construction)	С	North of Red Bluff Drive
1S	Masonry box culvert	1940-1942	Widened (ca. 1985)	NC	North of FM 2353
1T	Masonry box culvert	1940-1942	Widened (ca. 1985)	NC	North of FM 2353
1U	Masonry box culvert	1940-1942	Widened (ca. 1985)	NC	North of FM 2353
1V	Masonry box culvert	1940-1942	Widened (ca. 1985)	NC	North of FM 2353
1W	Masonry box culvert	1940-1942	None	С	North of PR 36
1X	Masonry box culvert	1940-1942	None	С	North of PR 36

### **Statement of Significance**

Extending from Brackeen Drive to the SH 16/SH 254 intersection, the nominated segment of State Highway 16 was constructed between 1940 and 1942 and is associated with the WPA's Depression-era make-work initiatives. As the first all-weather transportation facility in the area, the road connected the Morris Sheppard Dam and the eastern shores of Possum Kingdom Lake to major roadways. The nominated segment demonstrates exceptional hand-labor workmanship and engineering through its masonry culverts, masonry guard wall, and masonry arch bridge. In accordance with the *Historic Road Infrastructure of Texas* Multiple Property Documentation form (henceforth referred to as the *Texas Historic Road MPS*) Statements of Historic Contexts (Section E) and Associated Property Types (Section F), the nominated 8.4-mile segment of SH 16 is a significant structure under Criterion A for Transportation and Criterion C for Engineering at the state level of significance. The period of significance extends from 1940 to 1963. Under Criterion A, the period of significance begins in 1940 with the initial construction of the roadway and ends in 1963 with the THD upgrade project. The period of significance under Criterion C is 1940 to 1942, the date of construction for the roadway and its contributing resources.

#### **Depression-Era Construction Projects**

During the Great Depression in the 1930s, work-relief programs such as the WPA initiated and completed many projects throughout Texas. The history of the work-relief programs included in Section E of the *Texas Historic Road MPS* outlines the WPA's substantial funding to the THD (and other agencies) for construction of roads and other infrastructure projects between 1935 and 1943.<sup>3</sup> In northwestern Palo Pinto County, the WPA funded three major projects in the late 1930s and early 1940s: 1) the construction of the Morris Sheppard Dam (also known as Possum Kingdom Dam) at Red Bluff; 2) the construction of haul roads built to connect the dam site to nearby towns; and 3) the construction of a 27.75-mile improved road extending from 7.4 miles northeast of Brad to Salesville (see Figure 3 and Map 4) to provide access to the east side of Possum Kingdom Lake.

The history of the nominated portion of the SH 16 roadway begins with the construction of the Morris Sheppard Dam (1938-1941) and its associated haul roads (completed in 1938). In fact, the dam construction and the resultant Possum Kingdom Lake was the main reason for the majority of the development in northwestern Palo Pinto County. Local and state authorities recognized the need for dams on the Brazos River following the major flood of 1913 that impacted towns and farms and killed thousands of people from Waco to the Gulf Coast. The river would often fluctuate between flood conditions and droughts, and a need arose to control flood waters and conserve drinking water on all major waterways in the state. As a result, the Texas Legislature created the Conservation Amendment in 1917. During the 1920s, a survey of the state's rivers was completed, and in 1929 the state's first attempt to regulate the water in a river resulted in the establishment of the Brazos River Conservation and Reclamation (BRCR) District (now BRA).

In 1935, the U.S. Congress authorized the construction of the dam on the Brazos River at a location called Red Bluff. The BRCR District named the dam after U.S. Senator John Morris Sheppard, a New Deal Democrat who was a major supporter of the agency during its early years in the 1930s. By April 1935, the BRCR District submitted an

<sup>&</sup>lt;sup>3</sup> For more information about the history of Depression-era federal programs and the WPA, please see Texas Department of Transportation, *Historic Road Infrastructure of Texas*, 1700s-1965 Multiple Property Nomination, (2013) Section E.

<sup>&</sup>lt;sup>4</sup> Palo Pinto County Historical Commission, *History of Palo Pinto County, Texas* (Dallas: Curtis Media Corporation, 1986) 548. Kenneth E. Hendrickson, Jr., *The Waters of the Brazos: A History of the Brazos River Authority: 1929-1979* (Waco, TX: 1981) 20

<sup>&</sup>lt;sup>5</sup> Palo Pinto County Historical Commission, *History of Palo Pinto County, Texas* 548. Hendrickson 15.

application to the WPA requesting support for a series of 13 dams in the master plan. However, due to cost and available funding, the Morris Sheppard Dam was the only dam put forward for WPA and state funding because the BRCR District already started site planning at Red Bluff. In 1937, the U.S. Army Corps of Engineers began their survey and engineering work on the flat-deck buttress structure, flanked by earthen dikes and designed by the Ambursen Engineering Corporation of New York. The WPA provided about half of the funding for the \$9,000,000 dam and powerhouse. The project employed approximately 200 workers, many of which were skilled laborers. Construction of the 1.5-mile-long dam and powerhouse began in May 1938 and ended in March 1941.

During project planning phases for the dam construction, the WPA constructed local haul roads to bring supplies from south and east of the dam site. Designed to transport goods and for heavy truck traffic, these haul roads were not wide enough to accommodate two-way traffic. They were generally unpaved with no permanent drainage structures. As shown on the 1936 THD map, much of the haul road was constructed of crushed stone, referred to as metal roads. The haul roads leading to the dam began in the communities of Brad (population 28 in 1930) to the south and Graford (population 481 in 1930) to the east. Located along former Route 1A (currently known as US 180), the small community of Brad is approximately 8.5 miles south of the dam site. Established in the nineteenth century, Graford is a community located approximately 12 miles east of the dam site, at the western terminus of the Weatherford, Mineral Wells, and Northwestern Railway. Much of the construction activity associated with the dam and the haul roads originated from these two communities. While Brad offered transportation access in the area, Graford was the main shipping point and hub for dam and haul road workers. WPA Writer's Project Report notes that in August 1936, the population in Brad swelled to 150 residents and Graford's population increased to 800 residents.

South of the dam site, the haul road (approximately 8.5 miles long) extended north from Brad to the dam site (see maps for the haul road south of the Brazos River on Map 5). The WPA constructed this haul road sometime between 1936 and 1938. In August 1938, the THD initiated a project to build an all-weather improved public road from Brad to 7.4 miles northeast of Brad towards the dam site. Unlike the unimproved haul and metal roads, all-weather improved roads were paved roadways with an adequate road base width for two-lane traffic and permanent drainage structures. The all-weather improved road from Brad terminated approximately one mile south of the dam site, and an unimproved road traversed one mile north to the dam site and worker camp on the south side of the Brazos River. This roadway, which is located immediately south of and predates the current nominated segment of road, is designated as SH 16 on the THD Palo Pinto County Map in 1940 (see Map 5).

East of the dam site, the WPA and the BRCR District built a 12-mile haul road from Graford to the dam site in the summer of 1937 (see Map 5). Built "solely for the purpose of transporting materials," this haul road provided

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<sup>&</sup>lt;sup>6</sup> Hendrickson 22.

Possum Kingdom Country Book Committee, *Possum Kingdom Country* (Available at the Boyce Ditto Public Library, 1978) 81-82. Hendrickson 18. Ambursen Engineering Corporation built more than 250 dams in the U.S. and throughout the world by the mid 1930s. Their specialty was constructing dams on soft or permeable foundations, such as those in the Brazos River Valley.

<sup>&</sup>lt;sup>8</sup> Possum Kingdom Country Book Committee 80-82. Palo Pinto County Historical Commission, *History of Palo Pinto County, Texas* 549.

<sup>&</sup>lt;sup>9</sup> Eugene Schilder, Works Progress Administration Writers' Project Report on Palo Pinto County Towns (August 15, 1936; available at the Dolph Briscoe Center for American History, Austin, TX).

<sup>&</sup>lt;sup>10</sup> Schilder.

<sup>&</sup>lt;sup>11</sup> In August 1936, author Eugene Schilder notes that the population increase in Brad between 1930 and 1936 is a result of the proposed dam and the new road being constructed. The haul road is shown on the 1940 THD map.

<sup>&</sup>lt;sup>12</sup> Texas Department of Transportation, "Record of State Control Numbers, Sections, and Jobs" (Project Designation 0362-02-01 contracted in October 1938 and completed in August 1939; available at TxDOT Environmental Affairs Division).

access to the north side of the Brazos River, as well as the worker camp located atop the Red Bluff cliffs at "Observation Point" (where the BRA offices are now located). <sup>13</sup> The majority of this haul road is shown on the THD Palo Pinto County Map in 1940 as a "metal road" (covered in a crushed stone), and the remainder of the haul road is shown as unimproved.

#### **Construction of SH 16**

When the THD completed SH 16 from Brad to 7.4 miles north of Brad (approximately at present-day Brackeen Road), the agency had plans to build SH 16 across the Brazos River and extend the roadway northward. As noted in an April 1940 *Dallas Morning News* article, surfaced roads would be constructed "to make the dam and lake accessible" in the area. <sup>14</sup> To complete the SH 16/SH 254 improved roadway, the THD submitted Project Proposal Number LWR 362 to the WPA, with a construction estimate of \$311,089. <sup>15</sup> The project included three major elements: 1) the construction of a road on new location from 7.4 miles north of Brad to the "Possum Kingdom-Graford Road;" 2) the construction of a new bridge across the Brazos River; and 3) the upgrade of the "Possum Kingdom-Graford Road" from a haul road to an all-weather improved road for the traveling public's use.

Approximately 58.2 percent of the construction estimate included labor costs and 41.8 percent of the cost was for equipment and materials. Labor costs covered the range of workers at the project, including unskilled, intermediately skilled, and skilled laborers. Unskilled workers learned much of their duties on-site, as opposed to intermediately skilled workers who possessed base-level knowledge of the job. By contrast, skilled workers had special ability in their work, either through prior work experience or advanced training in technical schools or apprenticeships. To

Corresponding THD project plans show the initiation of a 27.75-mile-long road project from 7.4 miles north of Brad to Salesville and designation of the road as SH 16 and SH 254. There were three project sections: 1) the new-location segment from 7.4 miles north of Brad to Red Bluff Road, 2) Red Bluff Road to Graford, and 3) Graford to Salesville. The THD extended the roadway from Graford to Salesville to connect to US 281 and another railroad line in Salesville. On August 16, 1940, the WPA approved the roadway project funding. Most road construction projects during the Great Depression and World War II upgraded and/or improved existing county and local roads. However, a few new-location road projects were built as stand-alone roadways, while most new-location roads connected existing transportation networks (as noted in Section E of the *Texas Historic Road MPS*). 19

Project as-built plans show a 20-foot-wide roadway with two 10-foot-wide travel lanes on a 36-foot-wide road crown. As discussed in Section E of the *Texas Historic Road MPS*, narrow pavement widths accommodating two lanes of traffic with little to no shoulders was a common road design during the Great Depression and World War II. The THD also proposed masonry construction of the structures rather than using steel. The labor-intensive work inherent in constructing masonry structures was compatible with the WPA's overall mission to provide work for unemployed laborers across the country. Unskilled, intermediately skilled, and skilled laborers all worked on WPA

<sup>&</sup>lt;sup>13</sup> "Graford Jubilant as \$4,500,000 Possum Kingdom Dam is O.K.'d," *Dallas Morning News* (August 14, 1937).

<sup>&</sup>lt;sup>14</sup> T.A. Price, "Damsite War Permits Brazos to Flow On: Project at Possum Kingdom Not to be Seriously Delayed" *Dallas Morning News* (April 19, 1940).

<sup>&</sup>lt;sup>15</sup> Work Progress Administration, 16344 Project Proposal for the Construction of State Highways 16 and 254 (August 16, 1940), available at the Texas Department of Transportation Environmental Affairs Division.

<sup>&</sup>lt;sup>16</sup> Works Progress Administration (August 16, 1940).

<sup>&</sup>lt;sup>17</sup> Gjenvick-Gjønvik Archives, "Projects for the Works Progress Administration – Overview – 1936" (http://www.gjenvick.com/WPA-WorksProgressAdministration/ProgressReports/1936-10-15/B-ProjectsOverview.html#axzz2M23nnqzM, accessed on February 26, 2013).

<sup>&</sup>lt;sup>18</sup> Works Progress Administration (August 16, 1940).

<sup>&</sup>lt;sup>19</sup> TxDOT Historic Road Infrastructure of Texas, Multiple Property Nomination, Section E.

projects. The SH 16 project was a typical WPA-funded project, employing 317 federal and five local-sponsor workers, including approximately 250 unskilled, 41 intermediately skilled, eight skilled stone masons, 13 other skilled laborers, and 12 superintendents. The *Texas Historic Road MPS* notes that these workers excavated almost 100,000 cubic yards of earth, applied 75,000 cubic yards of sledged-caliche flexible base, and laid a high-type, all-weather asphalt surface. Additionally, masonry construction and hand workmanship were in line with the rustic aesthetic promoted by the NPS during this period and used extensively in road construction throughout the country. After the U.S. entered World War II, materials such as steel beams were not available and/or were very expensive. The use of masonry ensured that little steel would be required in the construction of the structures. Most importantly, WPA records show that project planners recognized that "excellent limestone [was] available along the right-of-way on all sections and [could] be secured by light quarrying operations." One of these quarries was located atop Kimberlin Mountain (see Maps 2.2 and 3.2). The use of masonry construction for the culverts ensured that the only steel used was rebar for the construction of the reinforced concrete slab superstructures that rested atop the masonry abutments. Likewise, on the Brazos River Bridge, the steel rebar was used only in the reinforced concrete slab superstructure atop the masonry arches.

While there were many culverts (including Resource Nos. 1A-1L, 1N-1P, 1W, and 1X) constructed along the road, the masonry arch bridge (Resource No. 1M) across the Brazos River was the largest undertaking. Flooding was common along this stretch of the Brazos River when water was released from the Morris Sheppard Dam. As such, project planners invested additional money, construction time, and materials to build a masonry arch bridge that could withstand substantial flooding without significant damage. Workers from coal mines in Strawn, Thurber, and Mingus worked on the bridge and learned to cut stone from the nearby limestone cliffs. While the bridge construction was labor-intensive, there were cost saving measures. Engineers noted that little machinery and few outside materials had to be used for the arch bridge. Additionally, the construction crews salvaged lumber from the nearby dam project (located approximately one mile upstream of the bridge) and used it for the formwork for the reinforced concrete slab superstructure. A construction photograph of the Brazos River Bridge is included as Photograph 34.

The masonry guard wall (Resource No. 1R) located on the east side of the road on Kimberlin Mountain was another element built as part of the roadway project. The THD submitted a project amendment application in May 1941 that added the masonry guard wall, noting that the "winding road in its present condition is a hazard to traffic." Using funds saved through efficiencies in paving the road, the WPA approved the addition of the guard wall in June 1941. In keeping with the roadway's rustic design aesthetic, the THD constructed the masonry guard wall using the same rough-hewn limestone used in the bridge and culverts.

The THD completed the entire project from 7.4 miles northeast of Brad to Salesville in November 1942. According to WPA records, the construction of the roadway was not possible without the aid of WPA funding, as "sufficient funds for this construction [were] not available from any source unless approved and constructed as a WPA project."<sup>25</sup> As a result, the construction of SH 16 and its associated masonry structures within the nominated portion

<sup>&</sup>lt;sup>20</sup> TxDOT *Historic Road Infrastructure of Texas*, *Multiple Property Nomination*, Section E. Works Progress Administration (August 16, 1940).

<sup>&</sup>lt;sup>21</sup> Work Progress Administration, 16344 Project Amendment (October 10, 1940), available at the Texas Department of Transportation Environmental Affairs Division.

<sup>&</sup>lt;sup>22</sup> Jon McConal, *Bridges Over the Brazos* (Fort Worth, TX: TCU Press, 2005) 40. Jennifer Nalewicki, "Bridging Texas: Spanning Time," *Texas Highways* (January 2007) 42.

<sup>&</sup>lt;sup>23</sup> McConal 40.

Work Progress Administration, 16344 Project Amendment (May 16, 1941), available at the Texas Department of Transportation Environmental Affairs Division.

<sup>&</sup>lt;sup>25</sup> Works Progress Administration (October 10, 1940).

of the roadway is a direct result of WPA funding and proved to be a "make-work" project that employed hundreds of out-of-work laborers in the closing years of the Great Depression.

### **Development Following Construction**

The WPA completed the Morris Sheppard Dam in April 1941, more than a year and half before the completion of the SH 16/SH 254 roadway project. The impoundment of the Brazos River resulted in the creation of the 18,000-acre Possum Kingdom Lake located in Palo Pinto, Stephens, and Young Counties. While flood control was a major reason for the construction of the dam, the recreational use of the lake was an added benefit for local and regional residents. After Possum Kingdom Lake was created in 1941, publications began promoting the area's recreational aspects associated with the lake and its close proximity to the metropolitan areas of Fort Worth and Dallas. These promotional materials focused on the natural beauty of the canyons, valleys, and rock formations and, as noted in *Texas Parade* articles throughout the 1940s, the area was promoted as a fisherman's paradise.<sup>26</sup>

In addition to nature trails and other recreational facilities built around the lake, state parkland was set aside on the east and west shores of the lake for the establishment of Possum Kingdom State Park. Another federal work-relief program – the Civilian Conservation Corps (CCC) – funded the construction of the park. In anticipation of the park's completion, PR 33 on the south side of the lake in Stephens County and PR 36 on the east side of the lake in Palo Pinto County (PR 36 intersects with SH 16 within the nominated limits) were constructed. The CCC built PR 33 and its associated masonry structures; however, there is no evidence that the CCC built PR 36. When the dam impounded the Brazos River in 1941, much of the planned parkland on the east side of the lake was under water. As a result, state planners abandoned plans for the state park on the east side of the lake in Palo Pinto County and only constructed the state park on the west side of the lake in Stephens County.<sup>27</sup>

Although Possum Kingdom State Park was not built on the eastern shores of the lake, other recreational facilities were constructed east of the lake. The completed SH 16 roadway was the only north/south road that provided access to the lake's east side, and visitors and local residents used the road to access nearby infrastructure and recreational facilities. The infrastructure facilities located close to the nominated section of SH 16 included the hydroelectric power plant on the dam's downstream side, the BRA Possum Kingdom Division headquarters, and the Possum Kingdom Fish Hatchery. The power plant was built at the same time as the dam to provide power for regional residents and to help pay for the dam's construction. Located at the end of Red Bluff Road, the power plant (and the downstream side of the dam) was only accessible from SH 16. Constructed in the 1940s, the BRA headquarters was accessed by FM 2353 and SH 16 less than a mile north of Kimberlin Mountain. The headquarters facility included office buildings, a visitors' center, and maintenance facilities for the dam's hydroelectric plant and the recreation areas surrounding the lake. In 1947, the Texas Game Fish and Oyster Commission (now incorporated into the Texas Parks and Wildlife Department) purchased land for a fish hatchery approximately 1,000 feet north of the Brazos River Bridge. Construction on the fish hatchery began in 1949 and was completed in 1950, when the 102.86-acre facility opened. Water from Possum Kingdom Lake provided by gravity flow has supplied water to the ponds since the facility's construction.

<sup>28</sup> Rutledge and Hutson, 32.

<sup>26 &</sup>quot;Maybe Your Nerves Need a Retreat," *Texas Parade* (August 1942) 11. Bruce Boone, "Try a Texas Vacation: Gasoline Rationing and Rubber Shortage Have Silver Lining – Texans Can See Texas in '43" *Texas Parade* (May 1943) 10. Frank Cheavens, "Lucky Lake of Possum Kingdom," *Texas Parade* (April 1949) 7.

<sup>&</sup>lt;sup>27</sup> Texas Parks and Wildlife, "The Look of Nature: Designing Texas State Parks during the Great Depression" (www.texascccparks.org/parks/possum-kingdom, accessed on January 17, 2013).

Recreational facilities were also accessible from SH 16, including a campground near the downstream side of the dam, a nature trail along the north banks of the Brazos River, and access to the Brazos River. Fishing and canoeing were especially popular recreation activities that attracted many visitors to the area following the construction of the dam and lake.

In the 1940s and 1950s, BRA first began leasing shoreline lots along Possum Kingdom Lake. The annual rental for a one-acre lot was \$12 per year with a 10-year or 20-year lease option. By the 1960s, the price of each lot rose significantly to \$100 to \$150 per year. The rising prices resulted from more people traveling to the Possum Kingdom area for recreational purposes. This was likely due to the increase in automobile ownership, as well as the improvement of existing roads and construction of new transportation corridors and freeways in the region. Residents from Fort Worth (approximately 70 miles to the east) and Dallas (approximately 90 miles to the east) came to Possum Kingdom Lake and owned or rented homes on the lake. With the increase in year-round and seasonal population, businesses, rental properties, motels, and churches were constructed to service the full-time and part-time residents.

The consistent use of SH 16 resulted in several maintenance projects within the nominated SH 16 segment. The most common repairs included the application of asphalt seal coats (in 1947, 1951, 1953, 1963, 1969, 1985, 1990, and 1994). Additionally, in 1963 the THD completed more extensive work, likely widening the roadway width from 20 feet to 22 feet wide to include the existing 11-foot travel lanes. At the same time, the highway department improved drainage along the road and constructed small structures, such as the reinforced concrete pipe culverts (Resource No. 1Q). From the SH 16/SH 254 intersection (the northern limit of the nominated boundary) to Salesville, TxDOT conducted several roadway projects between the 1960s and 1980s that resulted in the widening of the roadway and masonry culverts, as well as the realignment of several sections of the road.<sup>30</sup>

In the early 2000s, TxDOT widened SH 16 from US 180 to 1,200 feet south of the Brazos River in response to increased vehicular traffic and safety needs. This included a 1.75-mile segment of the SH 16 nominated roadway (from Brackeen Drive to the river). Under this project, TxDOT widened the roadway from 22 feet wide to 32 feet wide but did not alter any of the masonry culverts since they are located below the grade and the crown of the road. Figure 1 illustrates the typical sections of this and all portions of the nominated segment of SH 16.

For safety reasons, TxDOT plans to upgrade and improve six miles of the 8.4-mile nominated segment of SH 16 in 2015. Under this undertaking, TxDOT would add/widen shoulders from SH 254 to 1,200 feet south of the Brazos River, as well as realign the roadway to bypass the sharp curve at Kimberlin Mountain (location of Resource No. 1R). From 1,200 feet south of the Brazos River to the base of Kimberlin Mountain, TxDOT would add 4-foot-wide shoulders on either side of the roadway (matching the road profile of the nominated roadway segment south of the Brazos River). At Kimberlin Mountain, TxDOT would construct a 2,000-foot-long new-location section to bypass the curve. North of Kimberlin Mountain to SH 254, TxDOT would widen the existing shoulders to 8 feet. See Maps 2.1 through 2.3 for locations of the proposed improvements. No improvements would occur at the Brazos River Bridge, and 15 of the 16 un-widened, contributing masonry culverts would remain intact. One contributing unwidened masonry culvert (Resource No. 1O) is currently non-functional and would be covered by the improved SH 16 roadway. In June 2012, TxDOT, the Palo Pinto County Historical Commission (CHC), and the Palo Pinto County Judge agreed that the existing SH 16 alignment that includes the masonry guard wall would be turned over to the County through a Quit Claim Deed for the creation of a future Palo Pinto County park. See Figure 2 for the proposed typical sections for the upgrade and improvement project.

<sup>30</sup> Texas Department of Transportation, "Record of State Control Numbers, Sections, and Jobs" (Project Designation 0362-02-03 through 0362-02-19) contracted from 1947 to 1994; available at TxDOT Environmental Affairs Division).

<sup>&</sup>lt;sup>29</sup> Palo Pinto County Historical Commission, *History of Palo Pinto County, Texas*, 549.

#### Significance Evaluation

SH 16 from Brackeen Drive to the intersection of SH 16 and SH 254 was built by the THD with WPA funds during the late years of the Great Depression. In accordance with the registration requirements outline in the *Texas Historic Road MPS*, SH 16 typifies a Texas road built during the Great Depression as a road subtype, and it retains the physical characteristics to demonstrate its significance. As a result, the roadway is significant as a structure under Criteria A and C at the state level of significance. Under Criterion A, the road is significant in the areas of Transportation as a WPA-funded roadway that was the first all-weather public road in the area, providing the traveling public access to northwest Palo Pinto County and the recreational sites and activities at Possum Kingdom Lake. The nominated segment is also significant under Criterion C in the area of Engineering as an intact example of superior masonry workmanship and design.

In accordance with the *Texas Historic Road MPS*, the SH 16 roadway and its contributing features are nominated as a structure. As noted in the *Texas Historic Road MPS*, "segments of historic roadways should be considered structures comprised of contributing elements such as bridges, culverts, and other engineering features." The nominated SH 16 roadway and its associated contributing masonry culverts, masonry guard wall, and masonry arch bridge comprise an 8.4-mile segment of the larger 27.75-mile SH 16 roadway. As such, the contributing masonry resources (Resource Nos. 1A-1O, 1R, 1W, and 1X) are part of the roadway and are located within the public ROW. Therefore, the nominated structure derives its significance from the masonry resources and roadway engineering within the larger transportation context.

#### Criterion A

The nominated segment of SH 16 is significant under Criterion A for Transportation at the state level of significance. As explained in the *Texas Historic Road MPS*, a roadway's significance under Criterion A as a work-relief program is significant under the Transportation context if the road exhibits the use of hand labor and if research confirms the roadway's construction used federal work relief program funds. While the THD was responsible for engineering and constructing the road, the workers were hired with federal work relief funds under WPA Project Number 16344. THD and WPA records show that 317 federal and local workers constructed the nominated SH 16 segment and its masonry features. The *Texas Historic Road MPS* also notes that the project is considered the largest masonry bridge construction project undertaken in Texas. Hand labor was used to construct the rough-hewn limestone and rustic style masonry arch bridge, masonry guard wall, and masonry culverts.

#### Criterion C

The nominated SH 16 structure is also significant under Criterion C for Engineering at the state level. The road demonstrates exceptional hand-labor workmanship, engineering, and design through its 18 contributing masonry features: culverts (Resource Nos. 1A-1L, 1N, 1O, 1W, and 1X), guard wall (Resource No. 1R), and arch bridge (Resource No. 1M). Called out as an example of Depression-era work-relief programs on Texas roadways in the *Texas Historic Road MPS* Historic Context Statement, the SH 16 roadway features are noted for their superior masonry workmanship, particularly the Brazos River Bridge. As noted in the *Texas Historic Road MPS*, "the Possum Kingdom Bridge was one of the few bridges built during the Depression to feature true masonry arch

<sup>&</sup>lt;sup>31</sup> TxDOT Historic Road Infrastructure of Texas, Multiple Property Documentation Form, Section E.

<sup>&</sup>lt;sup>32</sup> Ibid, Section F.

<sup>&</sup>lt;sup>33</sup> Ibid. Section E.

construction and is considered the largest masonry bridge construction project undertaken in Texas."<sup>34</sup> Coupled with the masonry culverts and masonry guard wall, the SH 16 nominated roadway exhibits some of the best and most revered masonry workmanship in the state. Additionally, the masonry features reflect the natural beauty of the canyons, valleys, and rock formations of the surrounding area. At the time of the road's construction, the NPS promoted this rustic style and, although featured most prominently in state and national parks, the style carried over to infrastructure and road projects outside the park system.<sup>35</sup> The masonry culverts, bridge, and guard wall on SH 16 exhibit these stylistic features and ideals, and the rough-hewn, variable-sized stone with concave joints intentionally showcase an unfinished or "rustic" appearance.

### Period of Significance

The overall period of significance for the nominated 8.4-mile segment begins in 1940, coinciding with the initial construction of WPA project number 16344, and ends in 1963 with a TxDOT project that added new drainage structures. This 1963 project reflected a shift from constructing masonry culverts to facilitate drainage to constructing prefabricated, mass-produced reinforced concrete pipes, such as Resource No. 1Q. Under Criterion A, the period of significance begins in 1940 with the initial construction of the roadway and ends in 1963 with the THD upgrade project. The period of significance under Criterion C is 1940 to 1942, the date of construction for the roadway and its contributing resources.

### Character-defining Features

The road retains "the essential physical features that enable it to convey its historic identity." This is seen in the road's character-defining features, which best demonstrate the road's significance under Criteria A and C. Its character-defining features are the alignment and masonry features. The best location for the movement of goods and people in the area determined the alignment. The bridge, culverts, and guard wall exhibit the rustic, naturalistic style of Depression-era WPA projects, which encouraged blending roadway and man-made features with the surrounding natural landscape.

The alignment refers to the horizontal or vertical movement of the road. The primary documentation regarding the construction of SH 16 indicates that the roadway alignment was established to provide the most efficient movement of goods and people in the area. The roadway alignment was important in providing accessibility to the Morris Sheppard Dam and the east side of Possum Kingdom Lake. The SH 16 roadway also opened the area to the traveling public and recreational opportunities associated with the lake. See Map 4 and Figure 3, which show the road's original alignment.<sup>37</sup>

The roadway's intact masonry features are also character-defining features of the roadway. The masonry culverts, guard wall, and arch bridge not only illustrate the hand labor and federal work-relief programs that funded the project, but they also demonstrate the superior engineering and design that was required to build such structures.

http://www.nps.gov/history/history/online books/rusticarch/part5.htm (accessed January 21, 2013).

<sup>&</sup>lt;sup>34</sup> Ibid.

<sup>35</sup> National Park Service, "Rustic Architecture: 1916-1942,"

National Register of Historic Places Multiple Property Documentation Form, *Historic US Route 66 in Arizona*, Teri Cleeland, National Park Service, 1988, quoted in TxDOT *Historic Road Infrastructure of Texas*, 1700s-1965 Multiple Property Documentation Form, Section F.

<sup>&</sup>lt;sup>37</sup> There are 20 as-built plan sheets, several of which show line drawings for the roadway with no point of reference. Several pages of the plan sheets do not provide beneficial or additional information to help demonstrate the road's significance. Therefore, the cover page and the plan sheets for the Brazos River Bridge are the only sheets included and referenced in this nomination.

They exhibit excellent hand-labor workmanship, as well as the harmonious blending of the transportation resources with their surroundings. Furthermore, the arch bridge over the Brazos River, which is the largest masonry bridge in the state, demonstrates exceptional masonry workmanship in its design and aesthetics.

In accordance with the *Texas Historic Road MPS*, the significance of the SH 16 nominated roadway is reflected in its character-defining features and their integrity of location, design, setting, materials, workmanship, association, and feeling. The alignment is unchanged since its construction completion in 1942, and while a few of the masonry features within the nominated boundary are damaged or altered, they remain in their original location. The roadway design exhibits a concentration of masonry features that convey the historic feeling of a WPA-constructed roadway. The design also provides a visual rhythm in the interrelationship between the masonry features. Although past minor widening projects increased the pavement width by a few feet in some locations, there is no evidence that these projects widened any masonry features, and the pavement width itself maintains some integrity. While the original ROW width of the roadway is unknown, any widening of the ROW is not considerable enough to affect the road's ability to convey its significance. As such, any changes in ROW and pavement width do not affect the SH 16 roadway's ability to convey its importance under Criterion A or Criterion C. The setting remains rural with wooded areas and rangeland and the rises and falls in elevation. There is only a small amount of modern intrusion (newly constructed businesses and residences) along the roadway, and these do not significantly detract from the roadway's setting.

The materials and workmanship from the roadway's period of significance are also retained. Over the years, additional road projects replaced and widened the pavement in the nominated segment without widening the majority of the masonry structures. Approximately 75 percent of the masonry features remain intact. The masonry arch bridge (Resource No. 1M) and un-widened masonry culverts (Resource Nos. 1A-1L, 1N, 1O, 1W, and 1X) exhibit hand-labored, rough-hewn limestone with concave joinery and are unaltered since their initial construction. The guard wall (Resource No. 1R) shows some signs of damage and alteration; however, the majority of the guard wall and its masonry features remain intact. The remaining five widened masonry culverts (Resource Nos. 1P and 1S-1V) have replacement head and wingwalls. As a result, the masonry features are no longer visible except from inside the culverts. Research indicates that TxDOT constructed the concrete pipe culverts (Resource No. 1Q) in 1963 when the agency added drainage structures to the roadway. This construction date also coincides with the end of the period of significance. These pipe culverts represent only a small portion of the total number of culverts on the 8.4-mile nominated segment.

Through the retention of materials, workmanship, design, setting, and location, the nominated segment also maintains its integrity of association and feeling. The original alignment of the road, purposely chosen for the most efficient movement of the traveling public and goods through the area, remains intact. The large number and high integrity of the extant original masonry features also help illustrate the road's association with the WPA and the feeling of the roadway as a Depression-era WPA transportation project.

Although TxDOT plans to complete a safety improvement project within the nominated segment of the roadway, SH 16 would still be eligible for the National Register through mitigation and minimization efforts. The proposal to realign a 0.5 mile section of the roadway on Kimberlin Mountain would only impact approximately 5% of the nominated roadway's existing alignment, and the majority of the road would be on its original alignment. Furthermore, TxDOT committed to give the existing SH 16 alignment on Kimberlin Mountain via Quit Claim Deed to Palo Pinto County. Currently, the county plans to create a public park on the existing alignment and retain the masonry guard wall (Resource No. 1R). Additionally, the unwidened masonry culvert (Resource No. 1O) that

<sup>&</sup>lt;sup>38</sup> Note that the widened culverts do not have widened roadways atop of them. These culverts may have been widened for functional reasons or in anticipation of future roadway widening.

would be buried as part of the realignment of the roadway would be dismantled. Per the County Historical Commission's (CHC) request, TxDOT would donate the rock materials to the CHC for use in the interpretative park. The proposed addition of new shoulders and widening of existing shoulders would not result in the alteration or widening of the road's contributing resources or character-defining features.

#### Contributing Resources

There are a total of 24 contributing and non-contributing resources along the roadway (Resource Nos. 1A through 1X). Contributing resources are the masonry features that are extant, intact, and retain sufficient integrity to reflect the significance of the roadway. The 18 contributing resources along the roadway include 16 un-widened masonry culverts (Resource Nos. 1A-1L, 1N, 1O, 1W, and 1X), the masonry guard wall (Resource No. 1R), and the masonry arch bridge (Resource No. 1M). The six non-contributing resources include five widened masonry culverts (Resource Nos. 1P and 1S-1V) and a system of reinforced concrete pipe culverts that are grouped as one resource (Resource No. 1Q).

The contributing resources exhibit and retain their masonry workmanship and design to demonstrate their significance. The masonry culverts' character-defining features are their masonry abutments and wingwalls. There are 16 masonry culverts that are un-widened and retain their masonry abutments and wingwalls. The masonry guard wall's character-defining features are a 2-foot-tall horizontal wall with consistently spaced 4-foot-tall vertical crenellations and free-standing 4-foot-tall vertical crenellations. Since the majority of the wall's character-defining features, including 88 out of 129 crenellations, remain intact and unaltered, the guard wall is a contributing resource to the nominated roadway.

The Brazos River Bridge is also a contributing resource of the nominated roadway, as it retains its masonry features and its original design features. The bridge's character-defining features are the arch spandrels, piers, abutments wingwalls, reinforced concrete deck, and reinforced concrete panel railing. The arch spandrels, piers, and abutments are the main features of the bridge that characterize it as an arch bridge and illustrate the use of hand labor. The wingwalls also exhibit the use of hand labor, and although the north wingwalls have been partially covered with concrete, masonry workmanship is still recognizable and visible. The deck and railing are character-defining features because they are design features that are integrally tied to the arch spans. Since they are internally connected to the arch spans, they cannot dislodge from the arches during flood events. The only portion of the Brazos River Bridge that is not a character-defining feature is the northeast wingwall extension that parallels SH 16 (Photograph 17). This wingwall extension has been impacted by vehicles. Since a significant portion of the northeast wingwall extension is not intact, it does not represent the workmanship or design of the bridge.

The non-contributing resources along the SH 16 roadway include five widened masonry culverts and a system of reinforced concrete pipe culverts. The widened masonry culverts were altered ca. 1985 and no longer retain their wingwalls. Large concrete box culvert extensions were added to both sides of the original masonry culverts, and the masonry abutments are only observed when one is several feet inside the culverts. These culverts were widened after the period of significance and do not reflect the significance of the roadway. The system of reinforced pipe culverts are also considered non-contributing resources as they do not contribute to the significance of the nominated SH 16 segment. As mass-produced, standardized drainage structures, they do not possess the rustic style seen in the contributing resources and do not reflect the original work-relief Depression-era construction project.

Summary of Contributing and Non-contributing Resources

- Contributing Resources
  - o 16 contributing masonry culverts (Resource Nos. 1A-1L, 1N, 1O, 1W, and 1X)
  - o Masonry guard wall (Resource No. 1R)
  - o Masonry arch bridge (Resource No. 1M)
- Non-contributing Resources
  - o Five non-contributing masonry culverts (Resource Nos. 1P, 1S, 1T, 1U, and 1V)
  - o Reinforced concrete pipe culverts (Resource No. 1Q)

#### **Boundary**

The boundary for the SH 16 nominated segment is within the public ROW from Brackeen Drive at the southern limit to the intersection of SH 16 and SH 254 at the northern limit. Although the THD built an additional 19.35 miles on SH 254 as part of WPA Project Number 16344, the SH 254 portion of the road has been realigned and widened, and the few remaining masonry culverts have been widened with concrete extensions. As a result, the SH 254 portion of the original WPA project does not retain sufficient integrity to illustrate its potential significance. In contrast, the nominated 8.4-mile segment retains its character-defining features because its alignment and the majority of the masonry features are unaltered.

#### Conclusion

The nominated segment of SH 16 represents an important time in American history, when federal work-relief projects employed 8.5 million out-of-work laborers. These laborers worked on thousands of labor-intensive projects across the country, and their efforts are reflected in the built landscape including masonry features in parks, building construction, and road construction projects. The SH 16 roadway demonstrates the WPA's funding of roadways in Texas, as exhibited by the masonry workmanship and engineering significance of the structures seen on the road. The SH 16 roadway also contributed to the development of eastern Palo Pinto County, providing access to the Morris Sheppard Dam and Possum Kingdom Lake. As such, the nominated 8.4-mile segment of SH 16 is a significant structure under Criterion A for Transportation and under Criterion C for Engineering.

<sup>&</sup>lt;sup>39</sup> Nick Taylor, "A Short History of the Great Depression," *New York Times*, Times Topics http://topics.nytimes.com/top/reference/timestopics/subjects/g/great\_depression\_1930s/index.html (accessed March 2, 2013).

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### **Verbal Boundary Description:**

The nominated property is the SH 16 asphalt road beginning at the SH 16/Brackeen Drive intersection and continuing north along SH 16 approximately 8.4 miles to the SH 16/SH 254 intersection in Palo Pinto County, Texas. The nominated property includes 18 contributing masonry features and encompasses only the public property within the publicly-owned right-of-way (ROW), which varies from approximately 50 to 60 feet on either side of the roadway's centerline (see Figure 1 for existing typical sections showing the width of the SH 16 roadway and the publicly owned existing ROW).

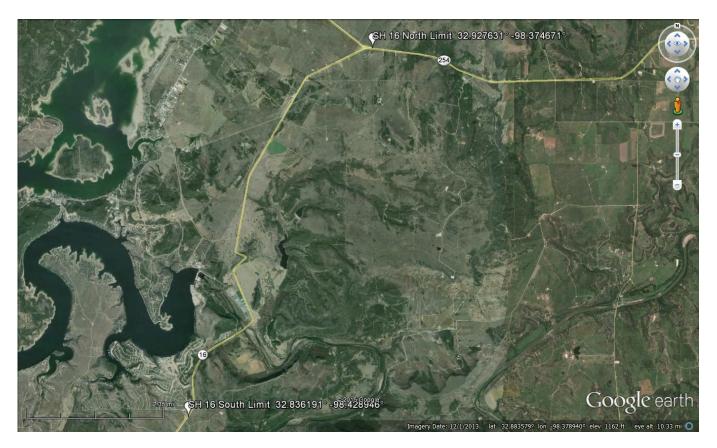
### **Boundary Justification:**

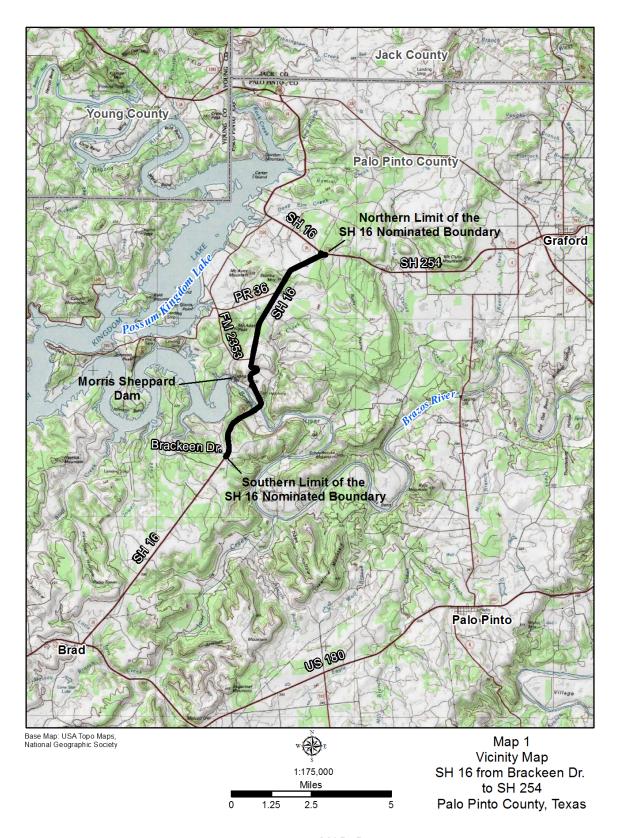
The boundary includes the historic roadbed, the bridge crossing at the Brazos River, the masonry elements under and alongside the roadway, and all publicly owned property within the ROW of SH 16 between Brackeen Drive and SH 254. The Works Project Administration (WPA) constructed the nominated SH 16 roadway as part of a larger roadway project (WPA project number 16344). The nominated boundary includes approximately one-third of the original WPA-constructed project. The southern limit of the nominated boundary is Brackeen Drive, which is the southern terminus of WPA project number 16344. South of Brackeen Drive, no masonry structures are found along or under the SH 16 roadway, and evidence shows that the THD constructed this portion of the road without federal work relief funds.

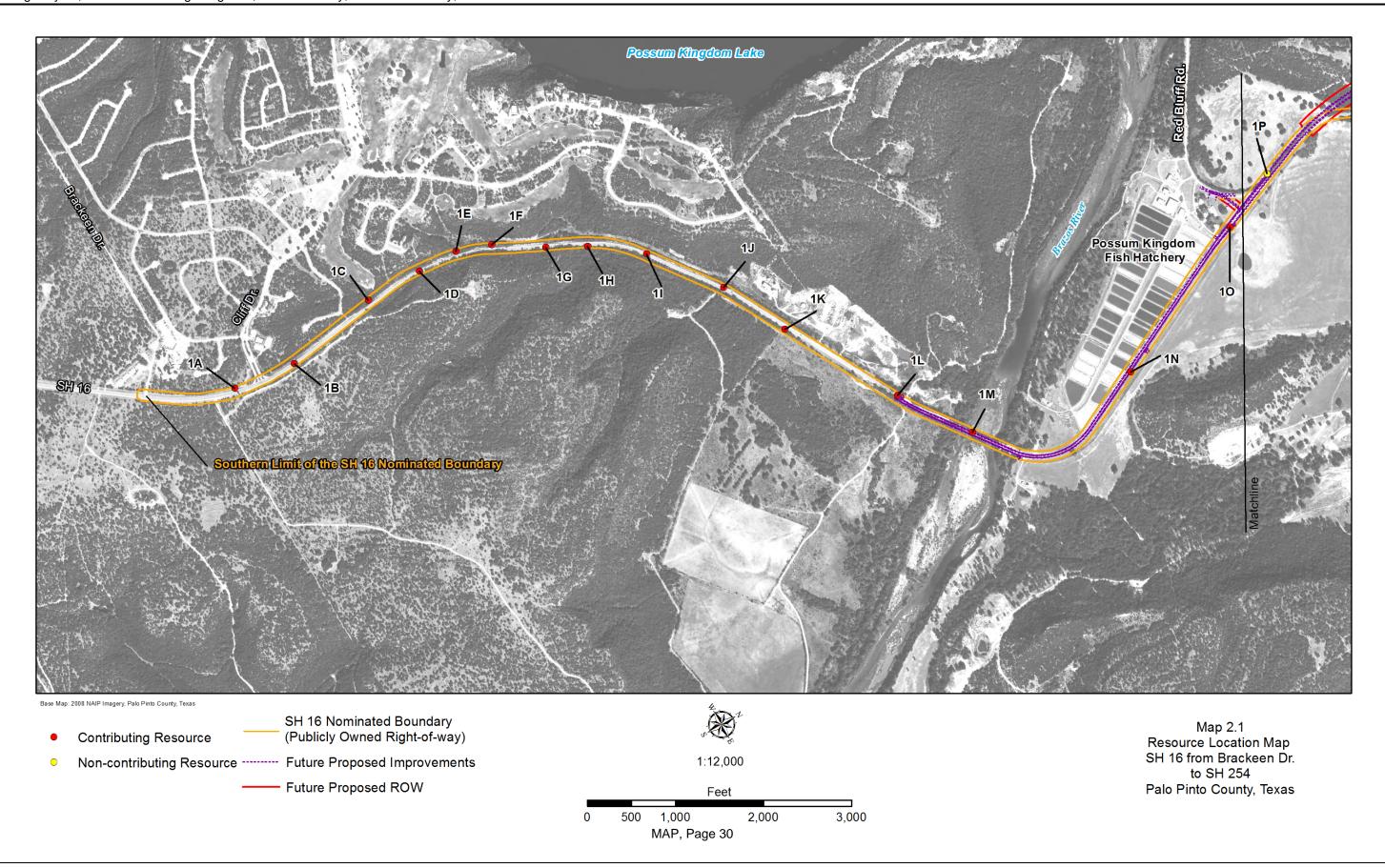
The northern terminus of the nominated boundary is the SH 16/SH 254 intersection. North of the SH 16/SH 254 intersection, SH 16 turns northwest towards Graham (Young County), and SH 254 continues east towards Graford. The WPA did not build SH 16 north of the SH 16/SH 254 intersection, and no masonry features are located along that portion of SH 16. The WPA built SH 254 east of the SH 16/SH 254 intersection as part of WPA project number 16344; however, the Texas Department of Transportation (TxDOT) has widened and realigned the SH 254 roadway east of the SH 16/SH 254 intersection in several locations. While some original WPA-constructed masonry culverts are extant on SH 254, they have been widened. The nominated section of SH 16 from Brackeen Drive to the SH 16/SH 254 intersection retains its masonry culverts, masonry wall, and masonry arch bridge. Additionally, the nominated section of the roadway retains its alignment, and only minor road widening activities have occurred within this segment of SH 16.

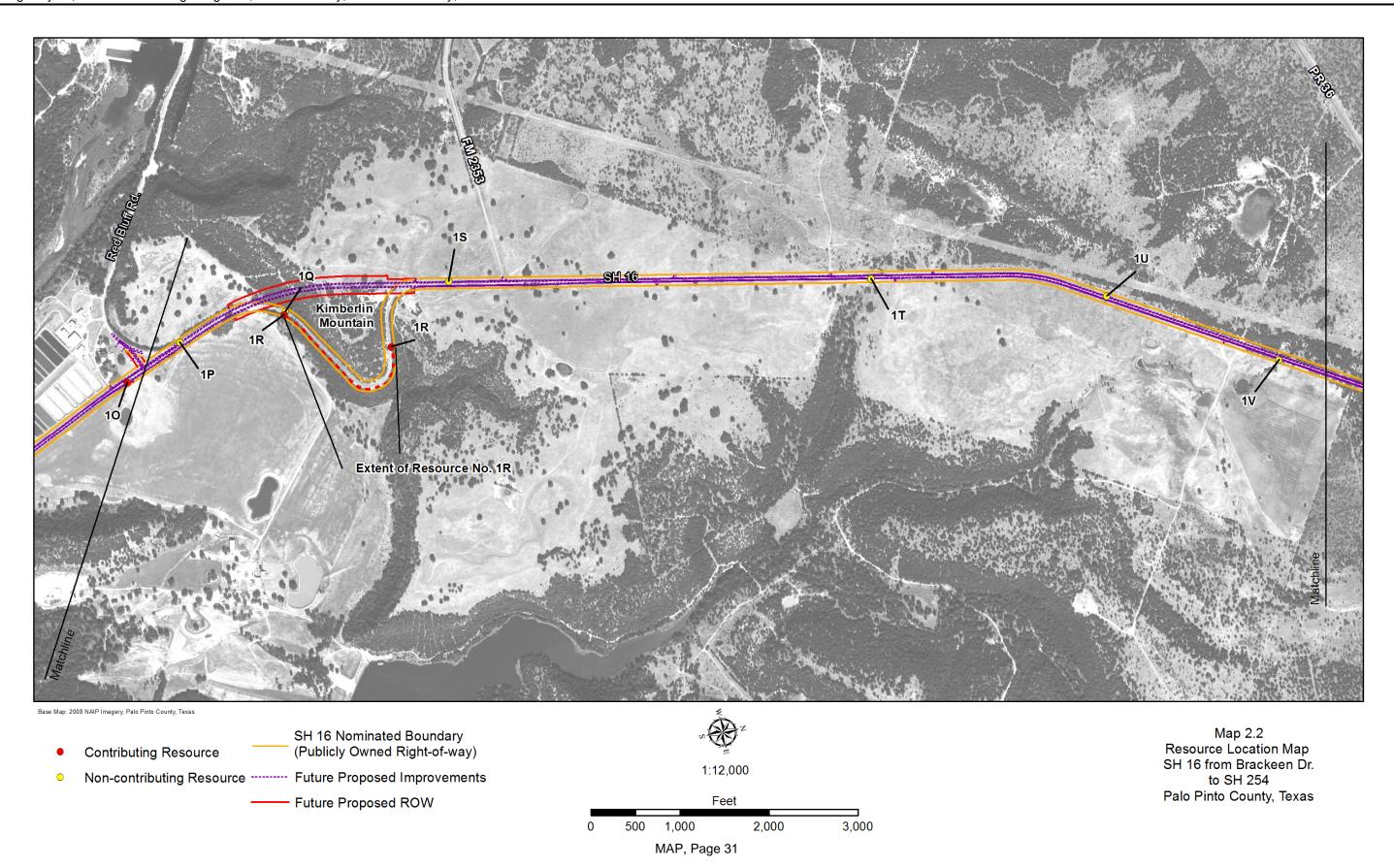
Source: Google Earth, accessed February 19, 2015.

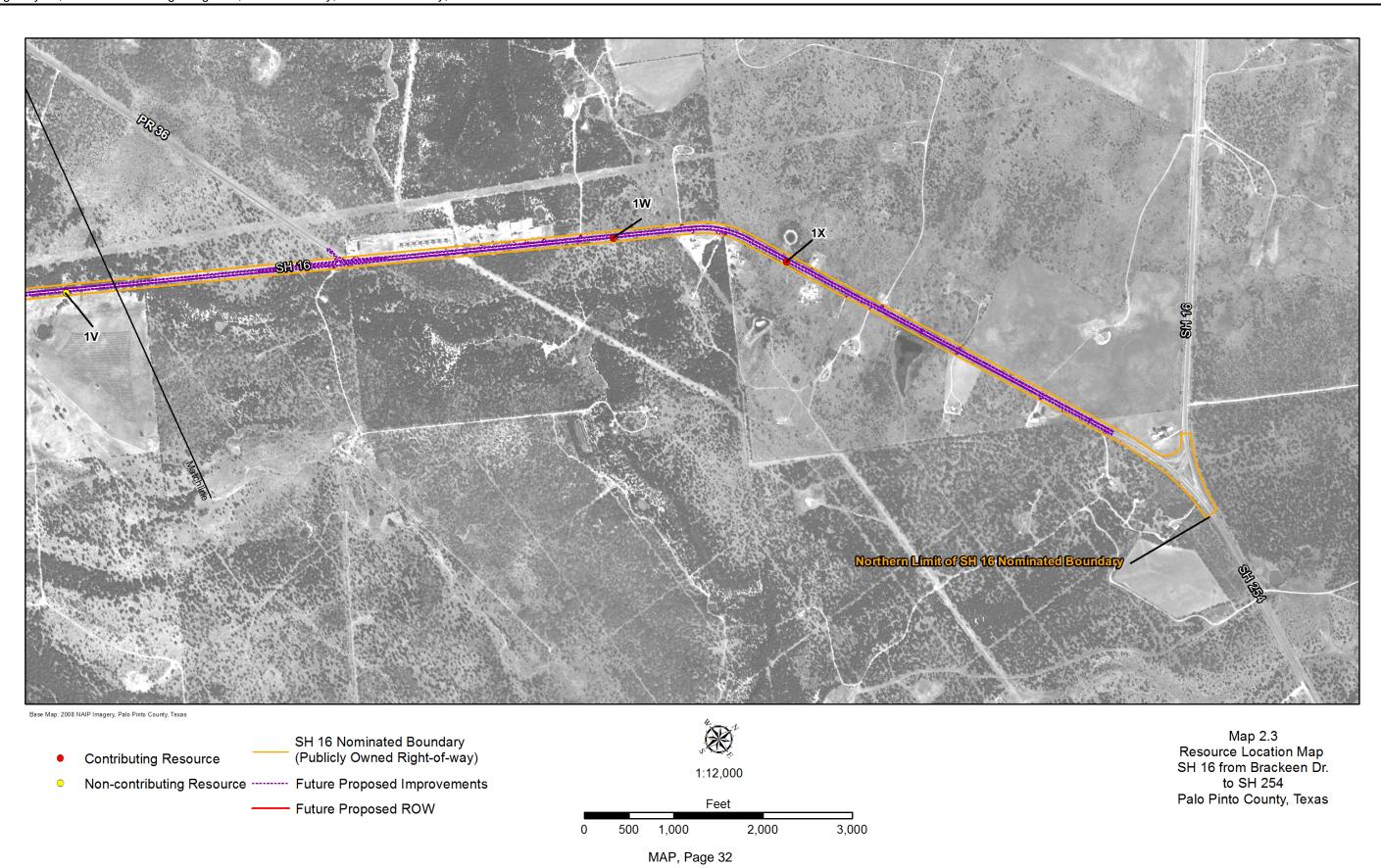
1. South Limit: 32.836191° -98.428946° 2. North Limit: 32.927631° -98.374671°







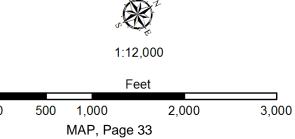




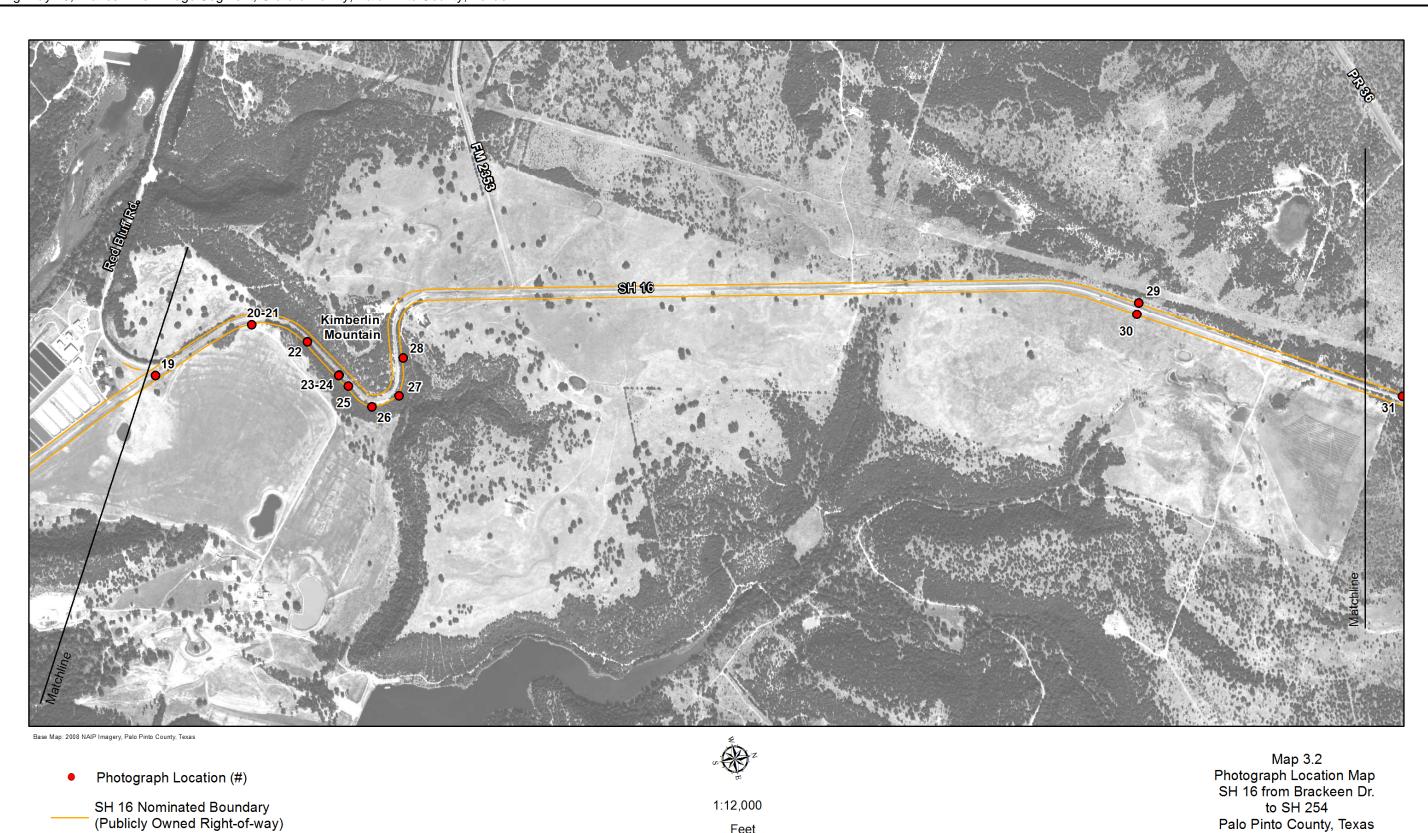


• Photograph Location (#)

SH 16 Nominated Boundary
(Publicly Owned Right-of-way)



Map 3.1
Photograph Location Map
SH 16 from Brackeen Dr.
to SH 254
Palo Pinto County, Texas



Feet

2,000

1,000

MAP, Page 34

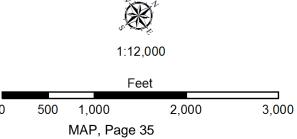
3,000

Palo Pinto County, Texas



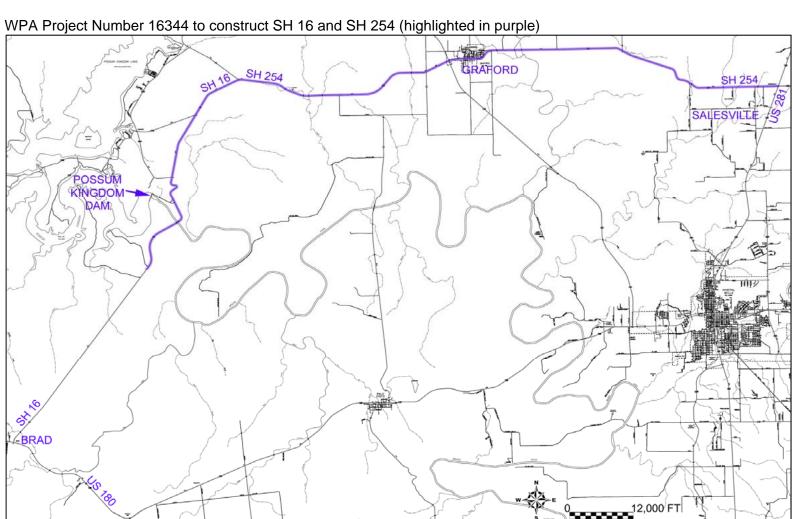
• Photograph Location (#)

SH 16 Nominated Boundary (Publicly Owned Right-of-way)



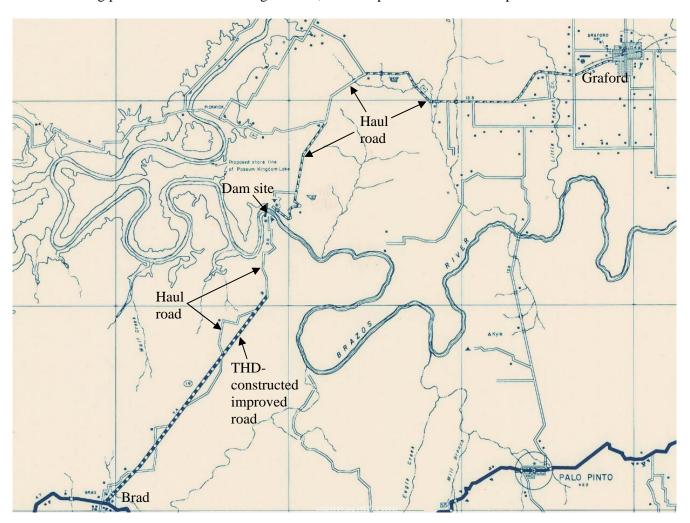
Map 3.3 Photograph Location Map SH 16 from Brackeen Dr. to SH 254 Palo Pinto County, Texas

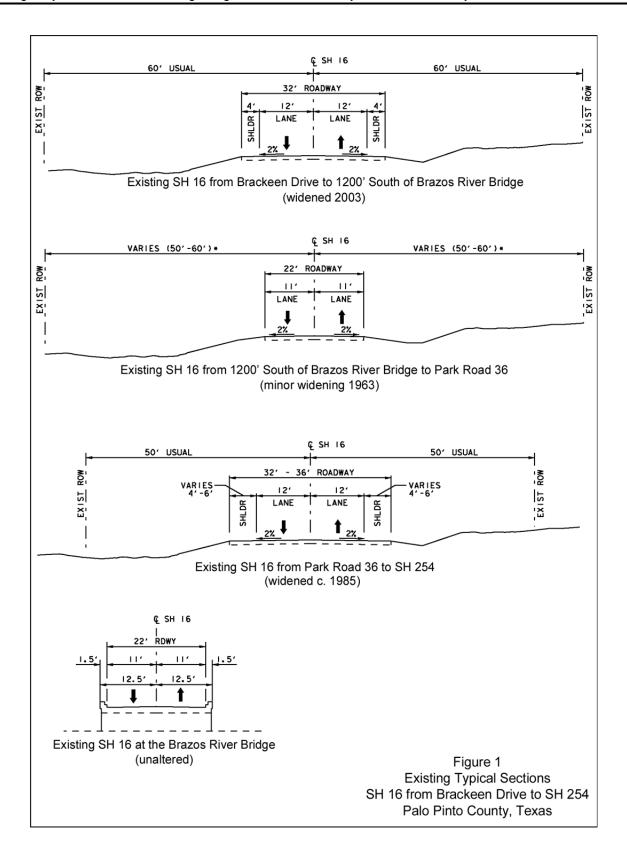
Map 4



### Map 5

Texas State Highway Department Map dated 1936, partially revised to 1939 and 1940. The existing roads in 1940 include: 1) a haul road south of the Brazos River, 2) THD-constructed improved road south of the Brazos River, and 3) crushed stone and unimproved haul road ("metal roads") north of the Brazos River to Graford. While the alignment of the some of the haul roads follow the existing SH 16/SH 254 roadway, the WPA-constructed roadway for the traveling public was initiated in August 1940, after the publication of this map.





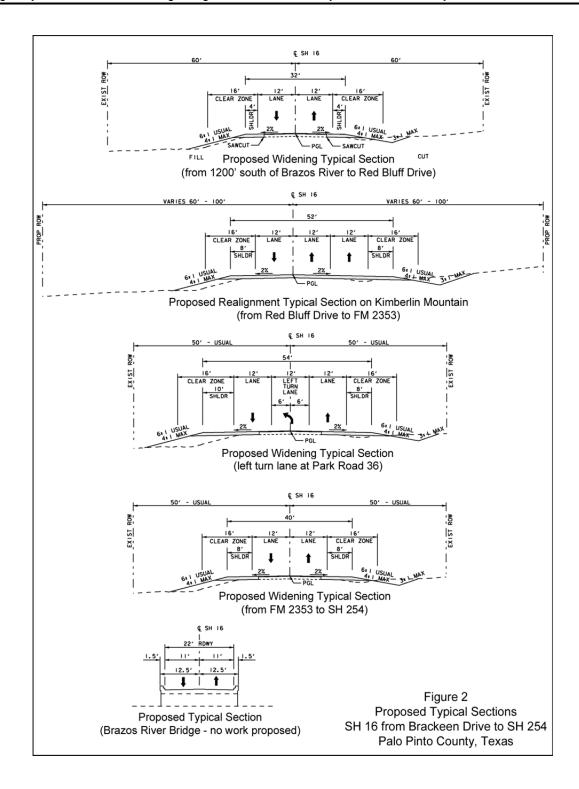


Figure 3 THD As-Built Plans for WPA Project Number 16344, dated 1942.

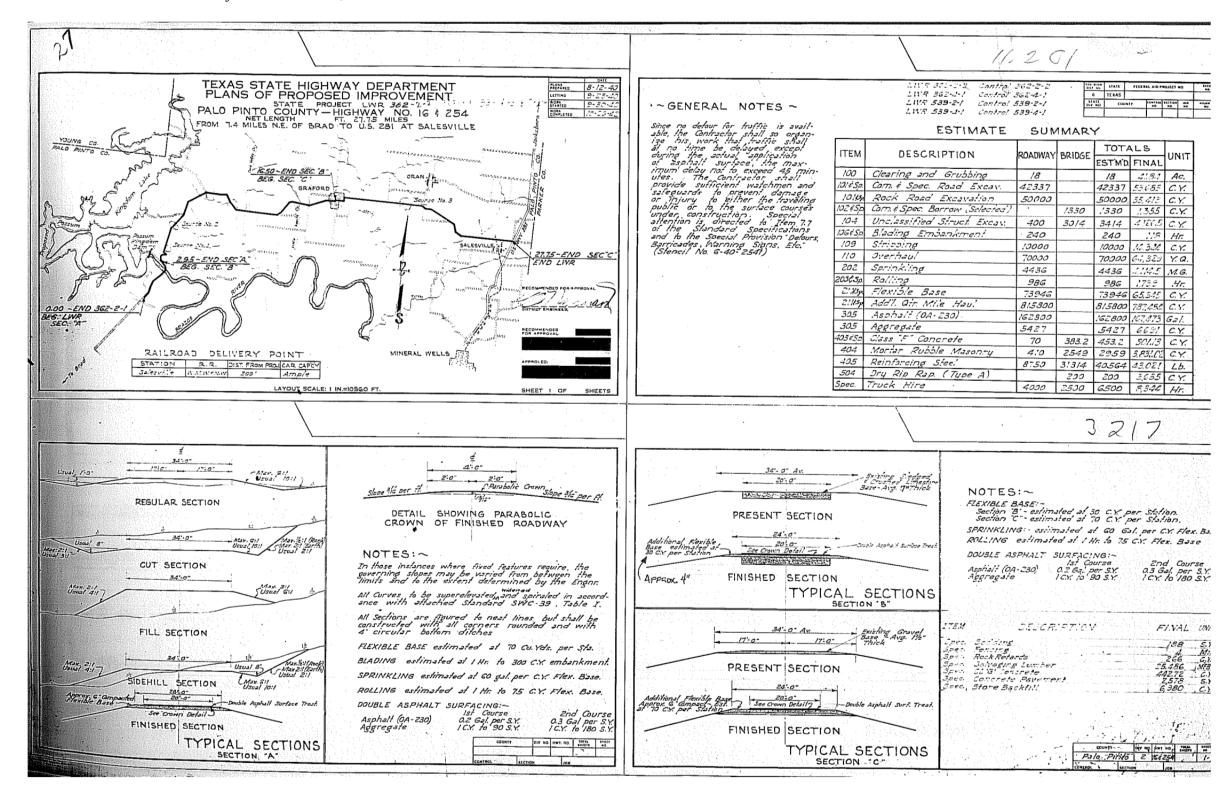


Figure 4
THD As-Built Plans for WPA Project Number 16344, Brazos River Bridge, dated 1942.

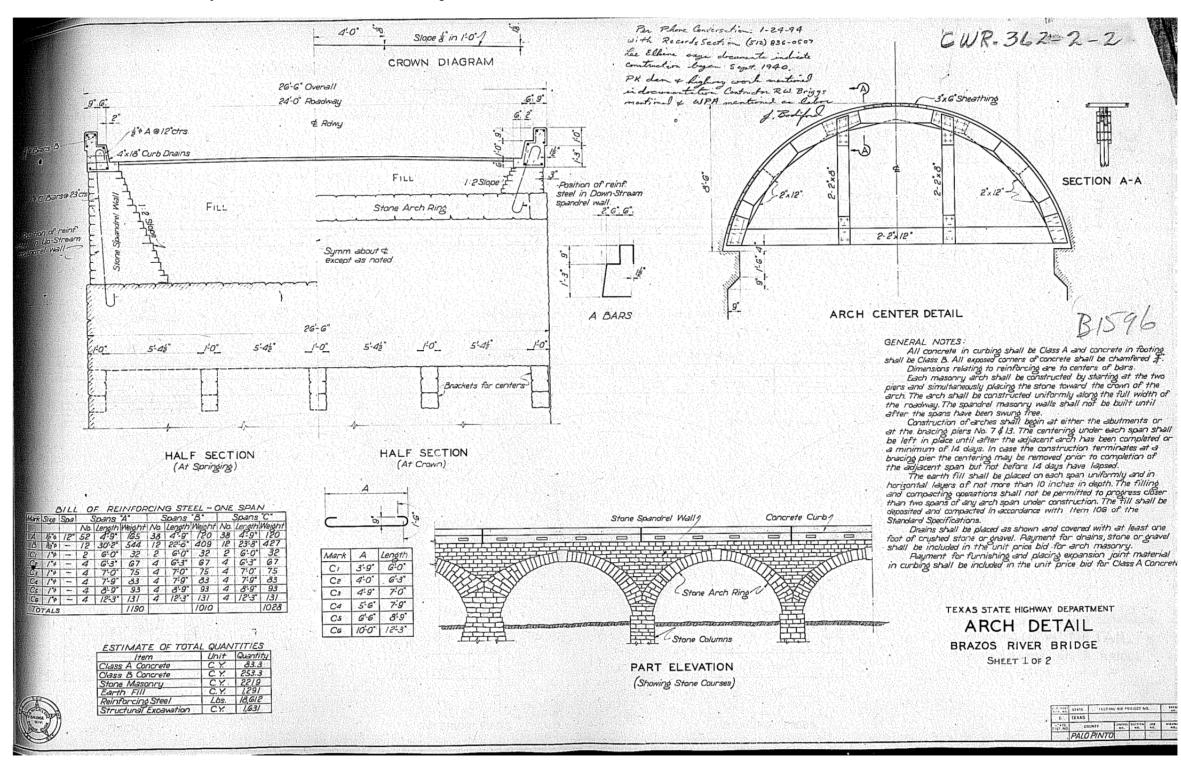


Figure 5 THD As-Built Plans for WPA Project Number 16344, Brazos River Bridge, dated 1942.

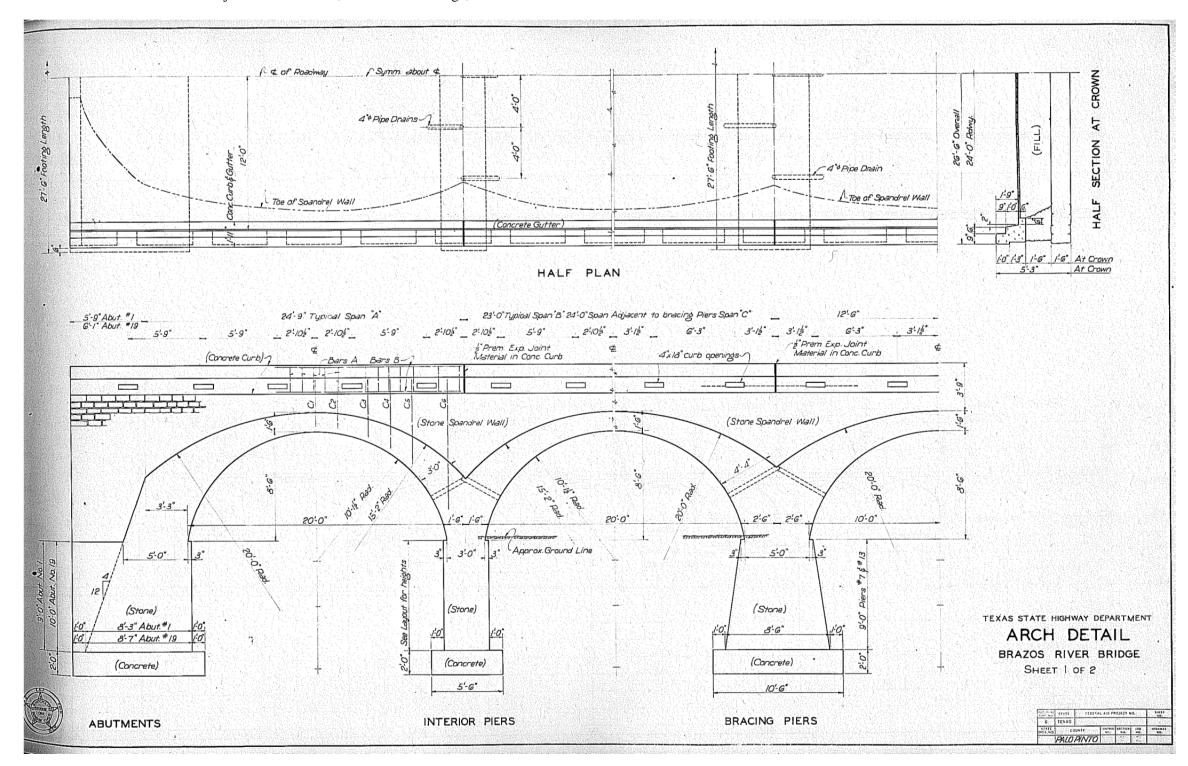
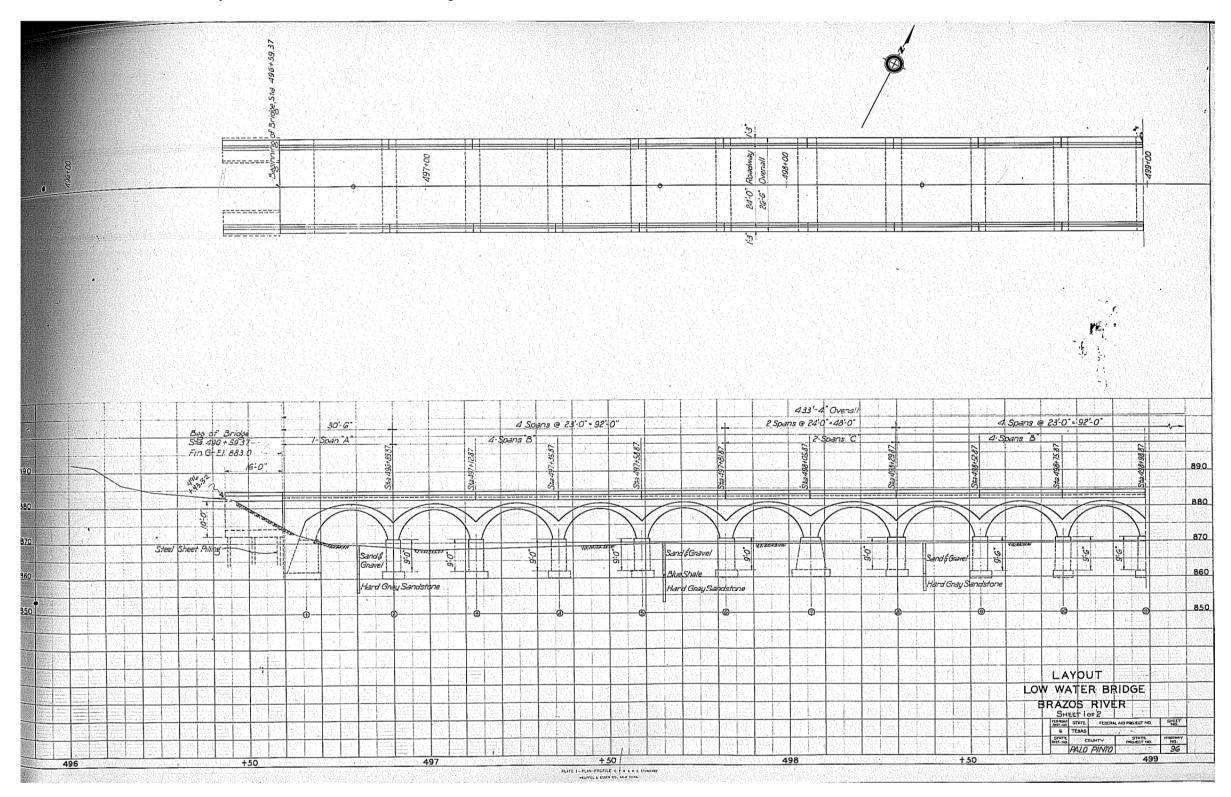
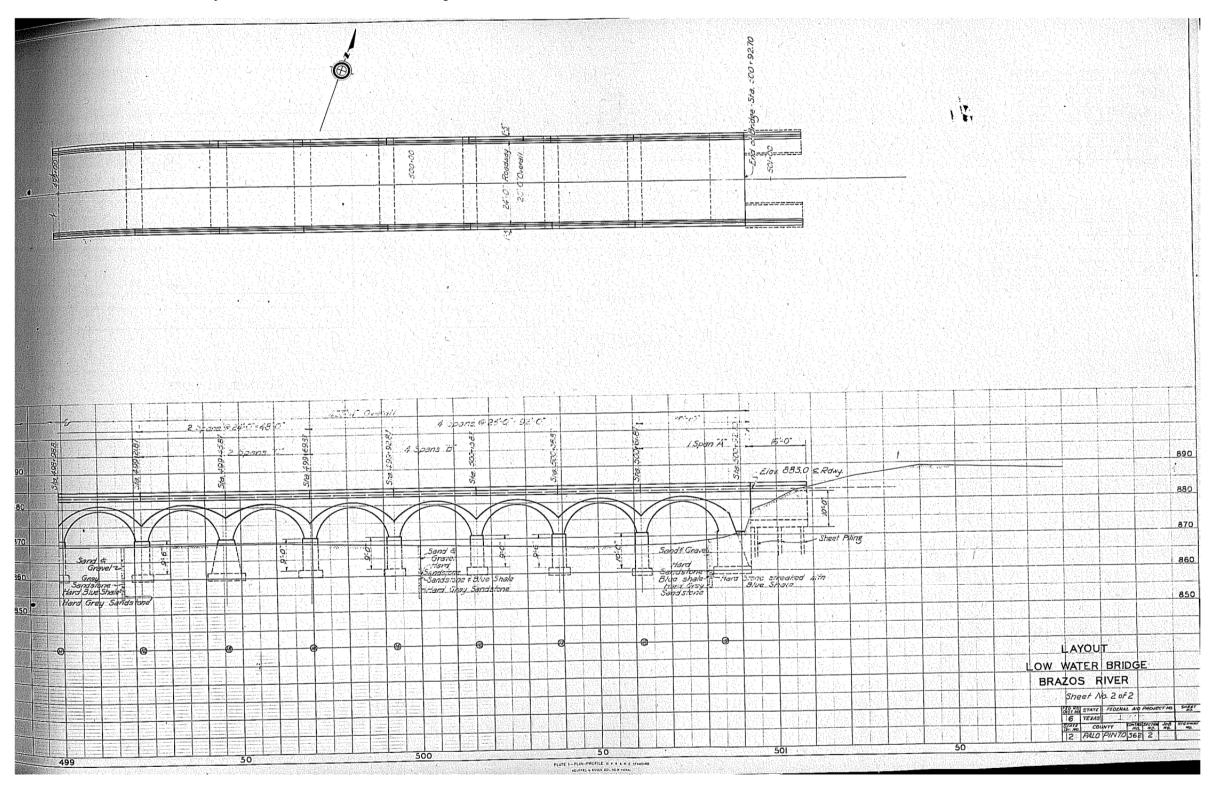


Figure 6
THD As-Built Plans for WPA Project Number 16344, Brazos River Bridge, dated 1942.



FIGURES, Page 43

Figure 7 THD As-Built Plans for WPA Project Number 16344, Brazos River Bridge, dated 1942.



Construction photograph of the Brazos River Bridge taken between 1940 and 1942.

Photograph provided by Mr. Woodward of Fort Worth, obtained from TxDOT Photo Library, Austin.

