

AN ARCHAEOLOGICAL SURVEY FOR THE LAS PALMAS WASTEWATER COLLECTION SYSTEM IMPROVEMENT PROJECT IN WEST-CENTRAL ZAPATA COUNTY, TEXAS

Antiquities Permit 5581



By

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LAS PALMAS WASTEWATER COLLECTION SYSTEM IMPROVEMENT
PROJECT IN WEST-CENTRAL ZAPATA COUNTY, TEXAS

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BVRA Project Number 10-04

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ABSTRACT

An archaeological survey of the route of a proposed sanitary sewer line in west-central Zapata County, Texas was performed by Brazos Valley Research Associates (BVRA) on March 23, 2010 under Antiquities Permit 5581 for the County of Zapata. Two arroyo crossings, the site of two proposed lift stations, and the area of previously recorded site 41ZP146 (totaling 0.78 acre) were investigated through a surface inspection, backhoe trenching, and shovel testing. No archaeological sites were found, and no artifacts were collected. Copies of the report are on file at the Texas Historical Commission (THC), Texas Archeological Research Laboratory (TARL), the Texas State Library, J. F. Fontaine & Associates, Inc., the County of Zapata, and BVRA.

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DEFINITION OF STUDY AREA

The project area consists of areas where the sanitary sewer line will cross *Arroyo Molletes*, *Arroyo Ranchito*, the site of two proposed lift stations, and the area where the Principal Investigator recorded prehistoric site 41ZP146 in 1993 on personal time. The Area of Potential Effect (APE) is within the right-of-way of United States Highway 83 (on the east side) and Las Palmas Road (on the south side) except for the site of the two proposed lift stations that are on private property (Figure 1). The pipe is eight inches in diameter and will be placed in a trench two feet wide and four feet (1.2 meters) deep. The two lift stations are to be constructed on sites with a footprint 20 feet x 20 feet. Each lift station will be primarily restricted to the surface with a well that will disturb the surface in an area around six feet in diameter and up to six feet deep. The lift station near Las Palmas will be constructed in an area that has been previously disturbed through a receiving manhole, septic tank, and collection pond. The project area is depicted on one USGS 7.5' topographic quadrangle Zapata (2699-434) (Figure 2).

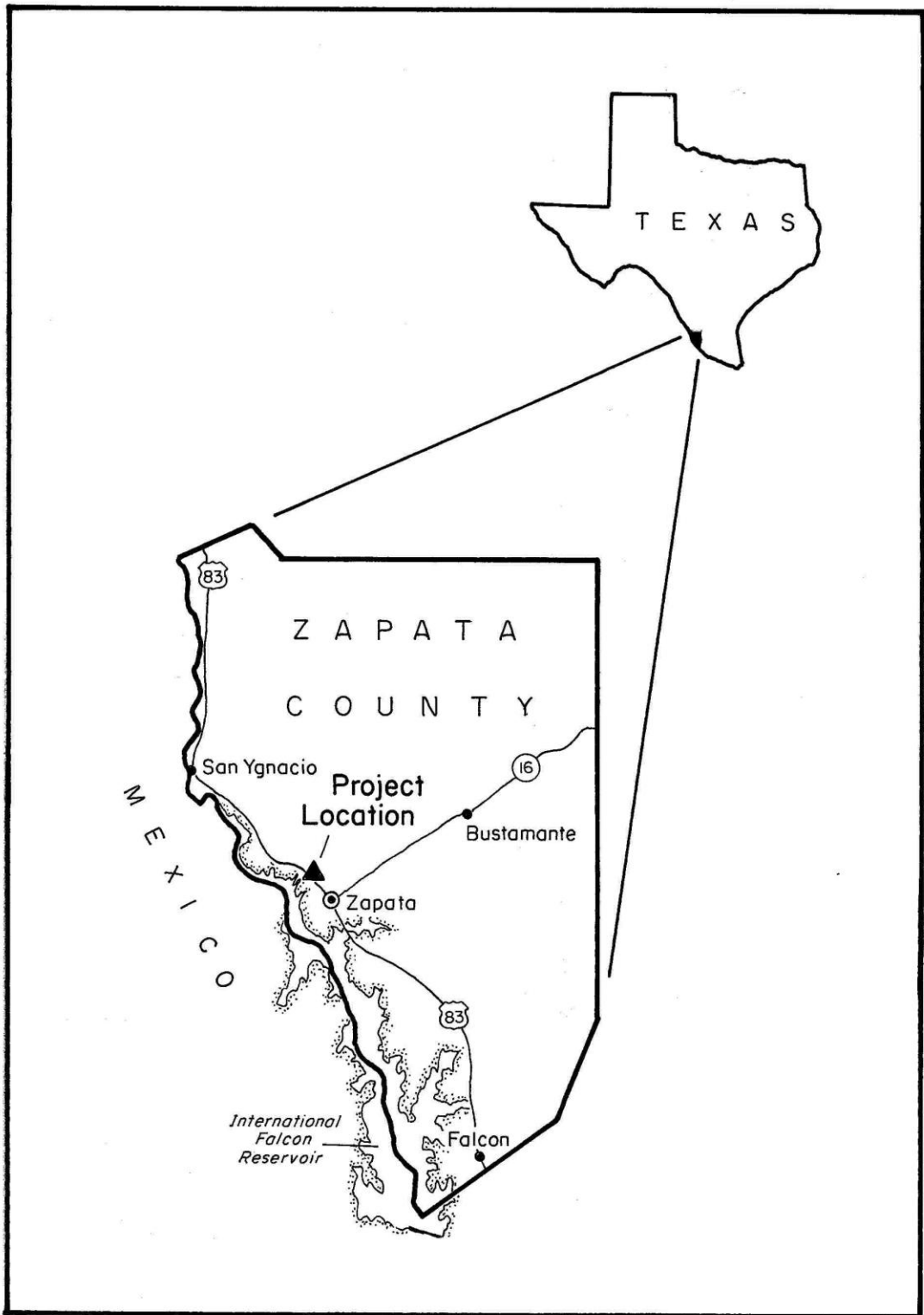


Figure 1. General Location

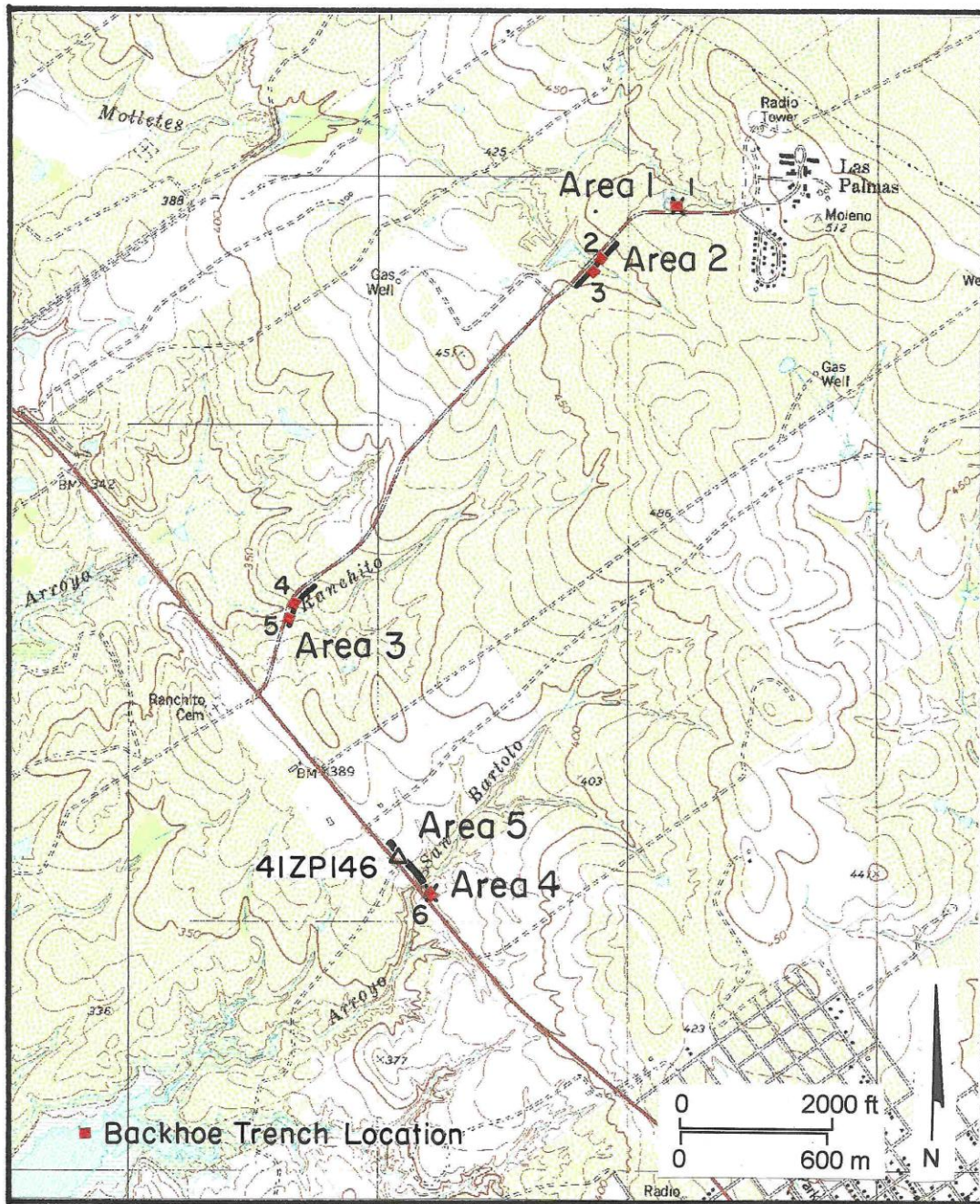


Figure 2. Project Area

MANAGEMENT SUMMARY

This project was performed in order to identify any cultural resources that might be present within the high probability areas and to assess the condition of previously recorded prehistoric site 41ZP146. The client is the County of Zapata. BVRA was retained by the client to perform the archaeological survey that was required by the Texas Historical Commission (THC). William E. Moore was the Principal Investigator, and James E. Warren performed the field survey with the assistance of Arthur Romine and Colton Warren. The field survey involved 24 person hours and was performed on March 23, 2010. The federal agency that is involved in this study is the USDA-RUS.

METHODS

Prior to entering the field, the site records at TARL and the Texas Archeological Sites Atlas were checked for the presence of previously recorded sites and other archaeological surveys in the project area and vicinity. Relevant archaeological reports documenting work in Zapata County were reviewed in order to become familiar with the types of prehistoric and historic sites found in the area. Contract reports by Warren (1989, 1993), Uecker and Warren (2005), and Kotter (1980) and a book by Thomas R. Hester (1980) were reviewed prior to this study. In addition, James E. Warren shared his vast knowledge of this area and helped formulate the Research Design. The project area was investigated by a 100% Pedestrian Survey, backhoe trenches, and shovel testing. Five areas were investigated, and they are defined as Area 1 (lift station near Las Palmas), Area 2 (crossing of *Arroyo Molletes*), Area 3 (crossing of *Arroyo Ranchito*), Area 4 (lift station on south bank of *Arroyo San Bartolo*) and Area 5 (location of previously recorded site 41ZP146). Before any subsurface investigations were conducted, the survey crew walked over the entire APE and looked for cultural materials on the surface and in the ditch profiles.

Area 1

Area 1 is the footprint of the proposed lift station on private property on the northwest side of Las Palmas Road (Figure 2). After a visual inspection of the surface revealed no evidence of a prehistoric or historic site, Backhoe Trench 1 was excavated. This trench was 14 feet long, 36 inches wide, and 75 inches deep (see Appendix I for profiles of the backhoe trenches). It was dug through sandy loam (5YR 4/3) to a depth of 38 inches and through sandy clay loam (10YR 6/5) from 38 inches to 75 inches. This trench was terminated when the client informed the survey crew that they had reached or surpassed the APE. No cultural materials or features were observed.

Area 2

Area 2 is the crossing of *Arroyo Molletes*, and is within the right-of-way of Las Palmas Road on both banks of the arroyo and on the northwest side of the road (Figure 2). After a visual inspection of this area revealed no evidence of a prehistoric or historic site, Backhoe Trench 2 and Backhoe Trench 3 were excavated. Backhoe Trench 2 was dug on the northeast bank of the arroyo just inside the fence within the highway right-of-way. It was 14 feet long, 36 inches wide, and 58 inches deep. It was dug through fine sandy loam (10YR 4/4) with gravels to a depth of 12 inches. The soil from 12 inches to the bottom of the trench was the same fine sandy loam, but with no gravels. This trench was terminated when the client informed the survey crew that they had reached or surpassed the APE.

Backhoe Trench 3 was dug on the southeast bank of the arroyo just inside the fence within the highway right-of-way. It was 14 feet long, 36 inches wide, and 60 inches deep. The top 18 inches consisted of fine sandy loam (10YR 4/4) with gravels in the first 14 inches and no gravels in the next four inches. The underlying soil was sandy clay loam (5YR 4/3). This trench was terminated when the client informed the survey crew that they had reached or surpassed the APE. No cultural materials or features were observed within either trench. Three percussion flakes were found in the first 12 inches, but their context is not known. They were not collected.

Based on the presence of cultural materials, the crew returned to the area and excavated six shovel tests within the stratum where the flakes were found in an attempt to locate additional materials that would delineate the size of this site within the APE. Two shovel tests were excavated to the east of the backhoe trench, and four shovel tests were excavated to the west of the backhoe trench (Figure 3). These tests were numbered 1-6 and spaced six feet apart with the easternmost trench (Shovel Test 3) being 15 feet from the arroyo. Shovel Test 1 (ST) was dug to 24 inches through fine sandy loam with gravels (10YR 4/4), and the remainder of the tests were dug through the same soil but to different depths. The depths of the six tests varied from 24 inches at ST 1 to 26 inches at ST 2 (see Appendix II for profiles of the shovel tests). The tests were 30 cm x 50 cm in size. Excavated earth was screened using ¼" hardware cloth. Details regarding the shovel tests are presented in Appendix II. No cultural materials or features were encountered in the tests.

Area 3

Area 3 is the crossing of *Arroyo Ranchito* and is within the right-of-way of Las Palmas Road on both banks of the arroyo and on the southeast side of the road (Figure 2). After a visual inspection of this area revealed no evidence of a prehistoric or historic site, Backhoe Trench 4 and Backhoe Trench 5 were excavated. Backhoe Trench 4 was dug on the northeast bank of the arroyo just inside the fence. It was 14 feet long, 36 inches wide, and 24 inches deep (Appendix I). It was dug through sandy clay loam (10YR 6/4) with gravels to a depth of 24 inches. This trench was terminated when sandstone bedrock was encountered. Backhoe Trench 5 was dug on the southeast bank of the arroyo just inside the fence within the highway right-of-way. It was 14 feet long, 36 inches wide, and 62 inches deep. The first 30 inches consisted of loamy clay with gravels (10YR 5/5) overlying several strata of clay with gravels before encountering sandstone bedrock. No cultural materials or features were observed in either trench.

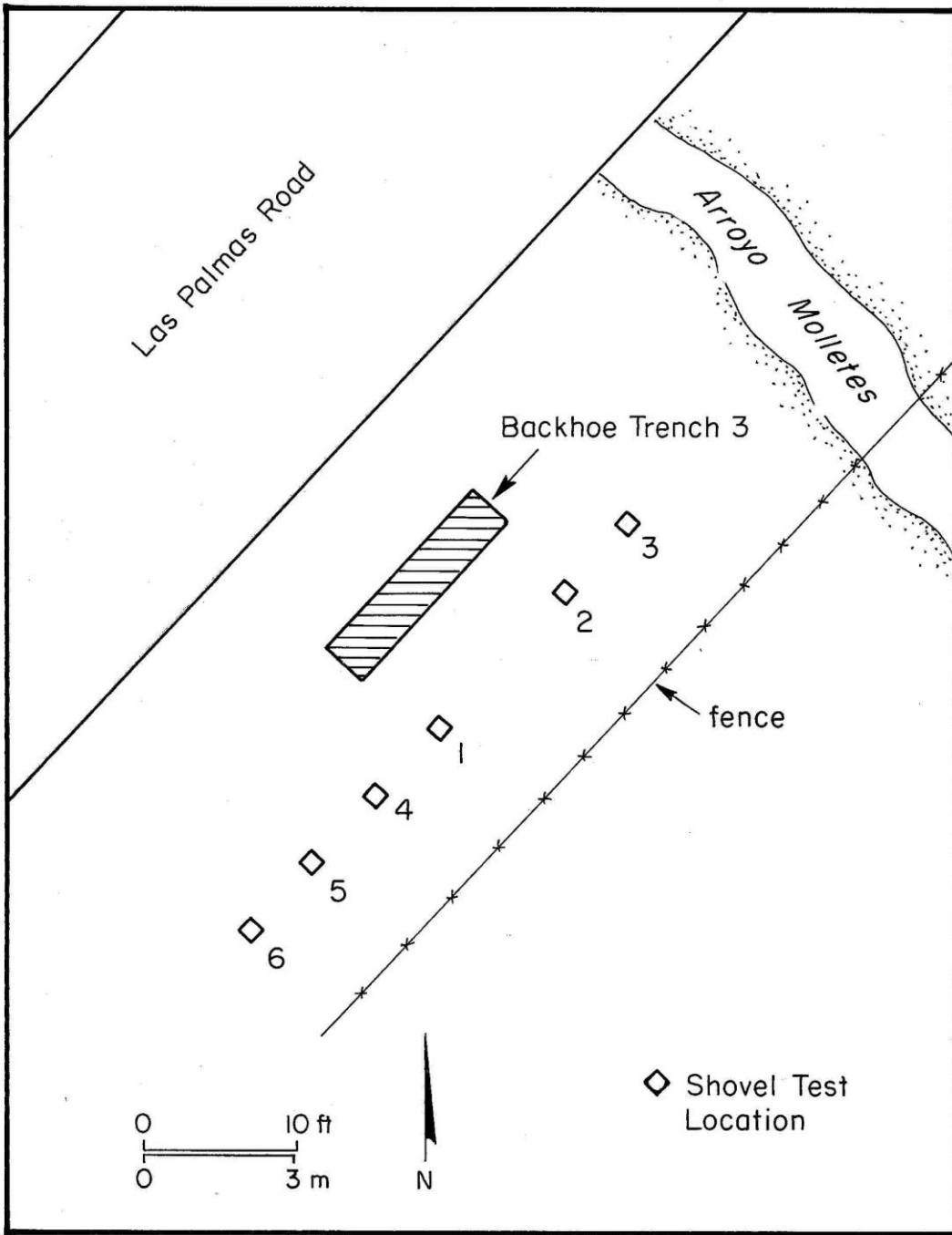


Figure 3. Location of Shovel Tests at Area 2

Area 4

Area 4 is the footprint of the proposed lift station on private property on the northeast side of Las Palmas Road and on the south bank of *Arroyo San Bartolo* (Figure 2). After a visual inspection of the surface revealed no evidence of a prehistoric or historic site, Backhoe Trench 6 was excavated. This trench was 14 feet long, 36 inches wide, and 85 inches deep. It was dug through sandy loam (10YR 4/4) to a depth of 50 inches and through sandy loam (10YR 6/4) with pieces of sandstone bedrock from 50 inches to 85 inches. This trench was terminated when a layer of sandstone bedrock was encountered. No cultural materials or features were observed.

Area 5

Area 5 is the location of previously recorded site 41ZP146 as plotted on the topographic quadrangle at the Texas Archeological Research Laboratory (TARL) and the south bank of the arroyo. This site is plotted as being on the north side of *Arroyo Bartolo* and the east side of United States Highway 83. When this site was recorded in 1993, the highway was a two-lane road. Since that time, it has been expanded to five lanes within the last two years. The survey crew conducted a thorough inspection of the exposed ground within the right-of-way and saw no evidence of this site. At the time of this survey, the APE had been greatly disturbed by highway widening and a paved entrance to a ranch. The right-of-way was found to be within a ten-foot ditch, and the surface consisted of clay subsoil that pre-dates human occupation. Figure 4 is a cross-section of the highway right-of-way that illustrates the current condition of the right-of-way due to widening of the highway and the probable condition of the right-of-way in 1993. The field survey crew surmised that the portion of site 41ZP146 within the right-of-way had been completely destroyed. Because the surface consisted of exposed clay subsoil, no backhoe trench or shovel tests were excavated. The cut bank and exposed clay subsurface were investigated for displaced cultural materials that may have eroded from the high bank, but nothing was found. The south bank was equally disturbed. Therefore, no backhoe trench was excavated in this area.

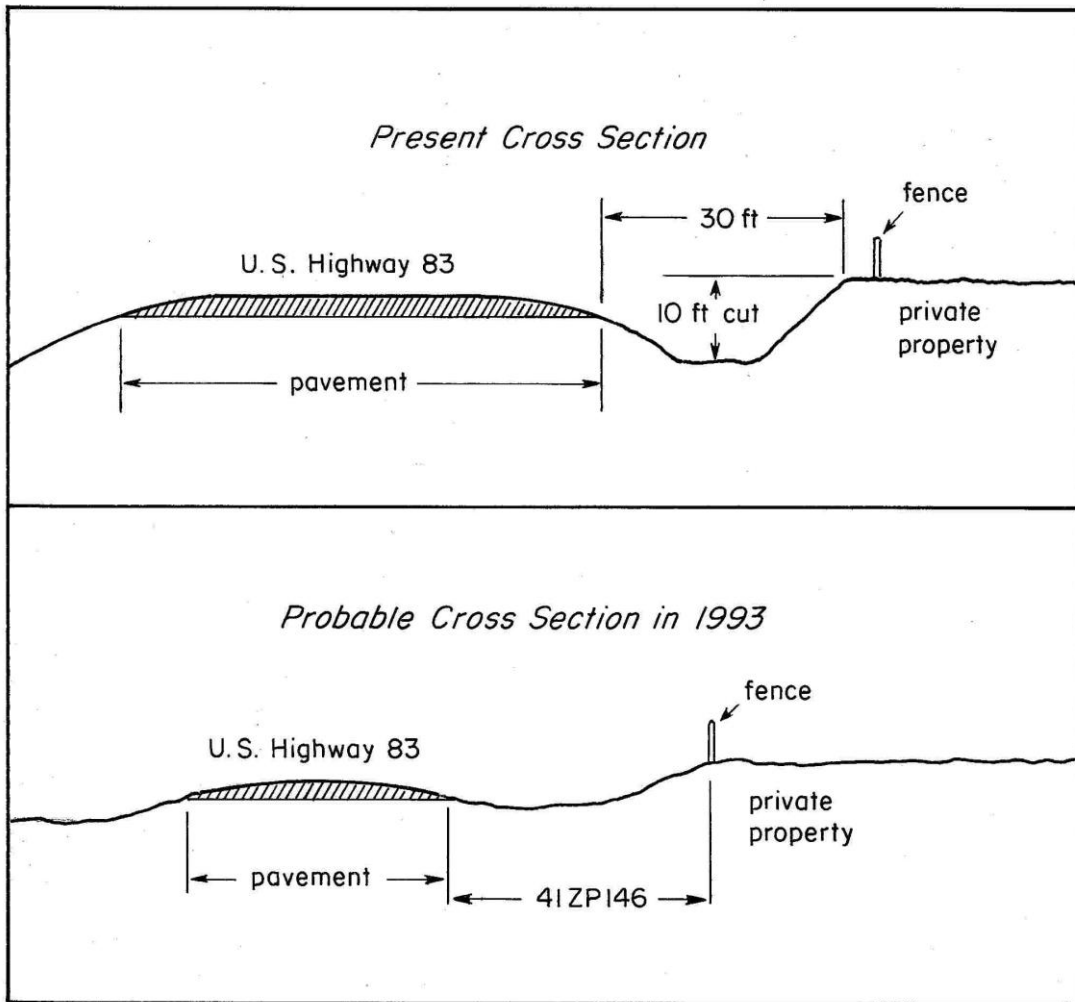


Figure 4. Cross-Section of Right-of-Way at Site 41ZP146

RESULTS

Examination of the files at TARL in Austin, Texas and the Atlas revealed one previously recorded prehistoric site (41ZP146) had been recorded in close proximity to the APE. A significant portion of United States Highway 83 had been surveyed by a TxDOT sponsored project, but no professional investigations had been conducted in the rest of the project area. The only cultural materials observed in the entire project area were three percussion flake fragments within the first 12 inches of Backhoe Trench 3 in Area 2. Although it is possible that a prehistoric site is present in the vicinity, the three flakes are viewed as an isolated occurrence of minimal significance. Therefore, it was decided not to record this area as a site given the fact that the actual context of the flakes is not known and no cultural materials were found in the six shovel tests dug in the immediate area. Based on extensive disturbance to the area due to widening of United States Highway 83 and a paved road that leads to a private ranch, that portion of site 41ZP146 in the APE has been disturbed to the point where it is not recognizable. Overall, the area examined is void of cultural materials.

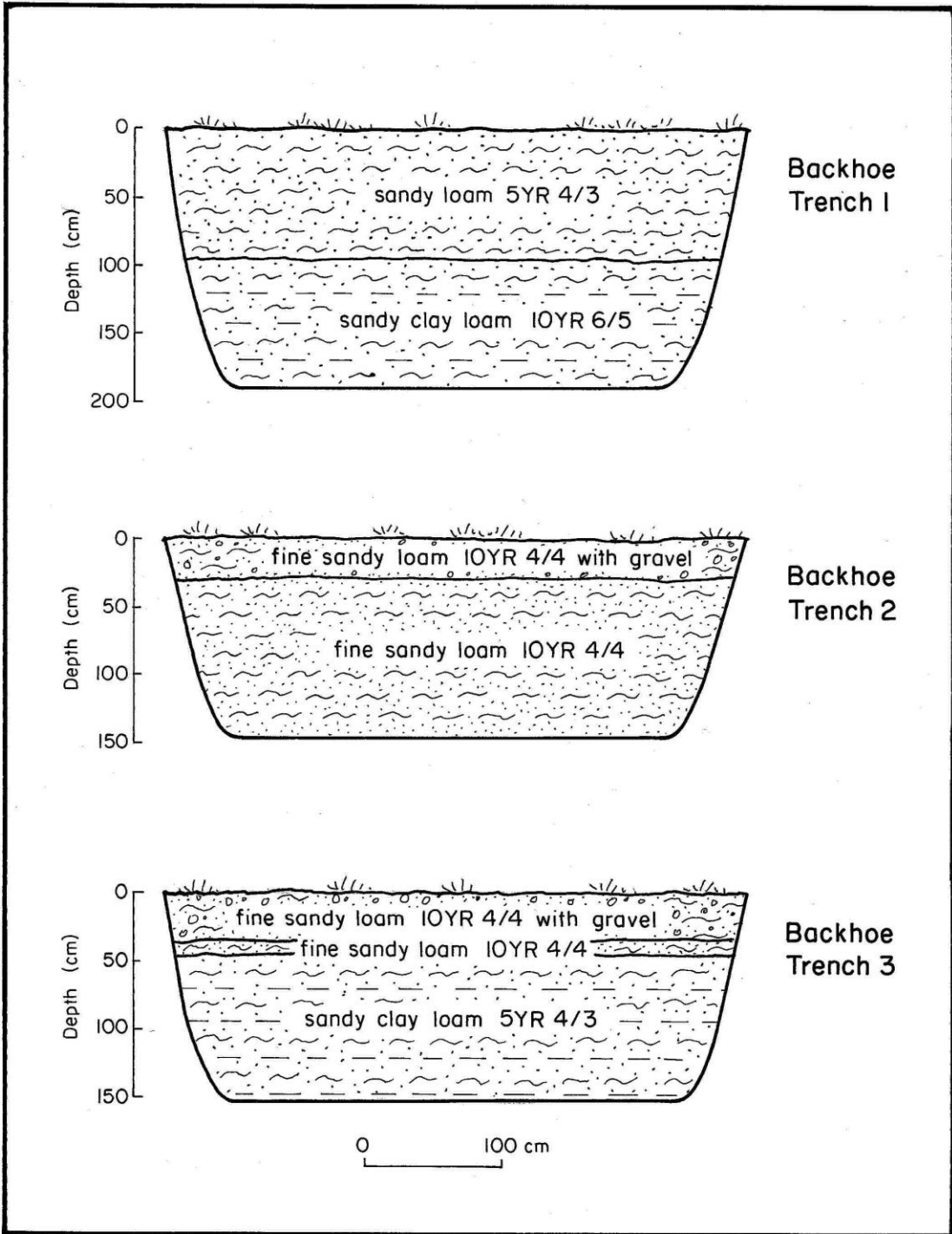
RECOMMENDATIONS

No evidence of a prehistoric or historic site was found as a result of this survey. It is recommended that the client be allowed to proceed with construction as planned. Should evidence of an archaeological site be encountered during the excavation of the trench at any of the areas investigated, all work must stop until the THC can evaluate the situation. This survey was conducted in accordance with the Minimum Survey Standards as outlined by the THC.

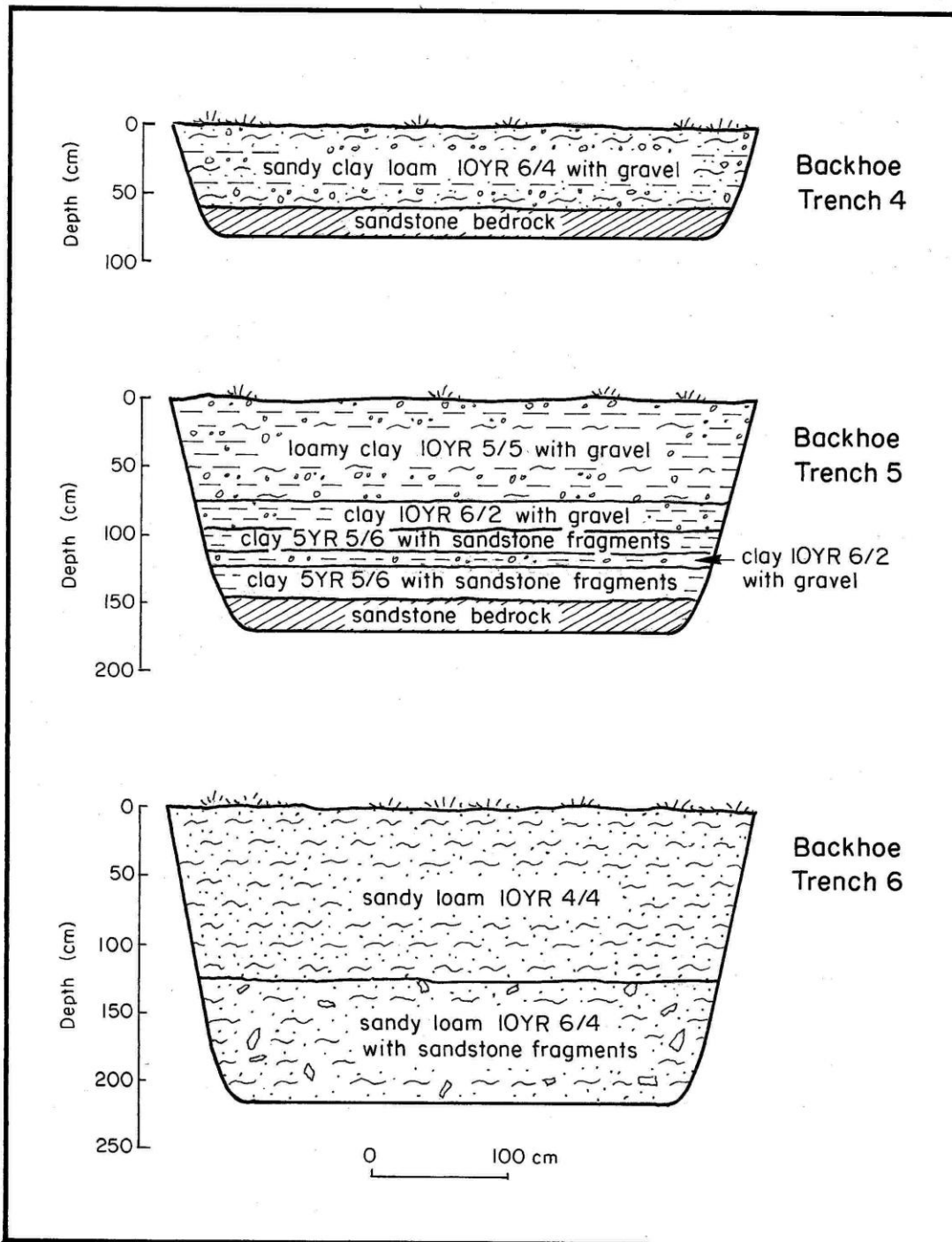
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APPENDIX I
BACKHOE TRENCH PROFILES



Backhoe Trench Profiles – Trenches 1-3



Backhoe Trench Profiles – Trenches 4-6

APPENDIX II: SHOVEL TEST LOG

Shovel Test	Depth (Inches)	Soil Observed	Results
1	24	fine sandy loam with gravels (10YR 4/4) surface to 18 inches sandy clay loam (5YR 4/3) 18 inches to 24 inches	negative
2	26	same soil as above Level 1 - surface to 20 inches Level 2 - 20 to 26 inches	negative
3	25	same soil as above Level 1 – surface to 22 inches Level 2 – 22 to 25 inches	negative
4	25	same soil as above Level 1 – surface to 21 inches Level 2 – 21 to 25 inches	negative
5	24	same soil as above Level 1 – surface to 19 inches Level 2 – 19 to 24 inches	negative
6	25	same soil as above Level 1 – surface to 20 inches Level 2 – 20 to 25 inches	negative