

**AN ARCHAEOLOGICAL SURVEY
FOR THE LOST PINES TRAILS PROJECT
IN CENTRAL BASTROP COUNTY, TEXAS**

Antiquities permit 4676



**By
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Brazos Valley Research Associates

Contract Report Number 188

2007

AN ARCHAEOLOGICAL SURVEY FOR THE LOST PINES TRAILS
PROJECT IN CENTRAL BASTROP COUNTY, TEXAS

BVRA Project 07-23

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ABSTRACT

An archaeological survey for a proposed system of hike and bike trails on the north bank of the Colorado River in central Bastrop County, Texas was performed by Brazos Valley Research Associates (BVRA) on October 2, 2007 under Texas Antiquities Permit 4676. William E. Moore was the Principal Investigator, and Roger G. Moore was the Project Archaeologist. In all, thirty acres were examined. No archaeological sites were found, and no artifacts were collected. The project area is in an area that floods often as evidenced by trash scattered over the landscape and in the trees. The soils varied from a deep sandy loam in flood-deposited, overbank natural levee sediments to heavy clay on slopes and in the floodplain. If any sites are present they will be buried below the Area of Potential Effect (APE) that is 12 inches. It is recommended that the project be allowed to proceed without further consultation with the Texas Historical Commission (THC), Archeology Division. Copies of the report are on file at the THC, the Texas Archeological Research Laboratory (TARL), the Texas Parks and Wildlife Department (TPWD), Environmental Stewardship, Inc., and BVRA.

ACKNOWLEDGMENTS

I am grateful to the following individuals for their participation in this project. Maps and other project information were provided by Steve Box of Environmental Stewardship, Inc. Roger G. Moore served as the Project Archaeologist and shared his knowledge of previous work in the immediate area. The records check was performed by Jean Hughes at the Texas Archeological Research Laboratory (TARL). Special thanks to Tom Dureka for providing a list of plants in the project area. Lili G. Lyddon prepared the figures, and Edward P. Baxter designed the cover. Nora Rogers edited the manuscript.

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INTRODUCTION

The Bastrop County Water Control and Improvement District #2 plans to construct a series of hike and bike trails on the north bank of the Colorado River in central Bastrop County adjacent to an existing 60.5-acre tract referred to as the River Refuge (Figure 1). This project is being funded by the Texas Parks and Wildlife Department with money provided by the Texas Recreational Trails Fund. This project was required by the THC, Archeology Division, and BVRA was selected to perform this service. A Research Design was submitted to the THC, and Texas Antiquities Permit number 4676 was issued to BVRA with William E. Moore as the Principal Investigator.

Approximately $\frac{1}{2}$ mile of the proposed trails will be constructed to conform to the American Disability Act of 1990 (ADA). These trails will be constructed on the western end of the project area (Area 1); will be designed for hiking, biking, and walking; and will be approximately $\frac{1}{2}$ mile in length. The surface will be smoothed and leveled to create a grade that conforms to the ADA. Most of the subsurface disturbance will be between six and eight inches. The maximum depth of disturbance will be twelve inches (30.64 cm). The grade for these trails will conform to the landform, which will minimize erosion. The area will be scraped and smoothed to accept a mixture of road base and crushed granite. This mixture will be compressed using a roller to make a hard surface. These trails will be six feet wide.

In the center of the project area is an abandoned gravel pit that has significantly disturbed the landscape (Area 2). This segment is approximately 15 acres or one-half of the total project area. Bollard cable and fencing will be constructed in order to restrict vehicle access from the trails and riparian areas along the river.

The rest of the trail system is in the eastern end of the project area (Area 3) and will create a lesser impact to the project area, as it will not be constructed to ADA standards. These trails will conform to the natural surface except in those cases when the grade is too steep. In these cases, six to eight inches (15.24 to 20.32 cm) of earth removal may be necessary to create a level grade. Fill may also be required, and wooden timbers will be used to hold the earth in place and minimize erosion. These trails will be approximately two miles in length, four to six feet wide, and located at the eastern end of the project area. The total size of the project area is 30 acres, and it is depicted on the topographic quadrangle Bastrop (Figure 2).

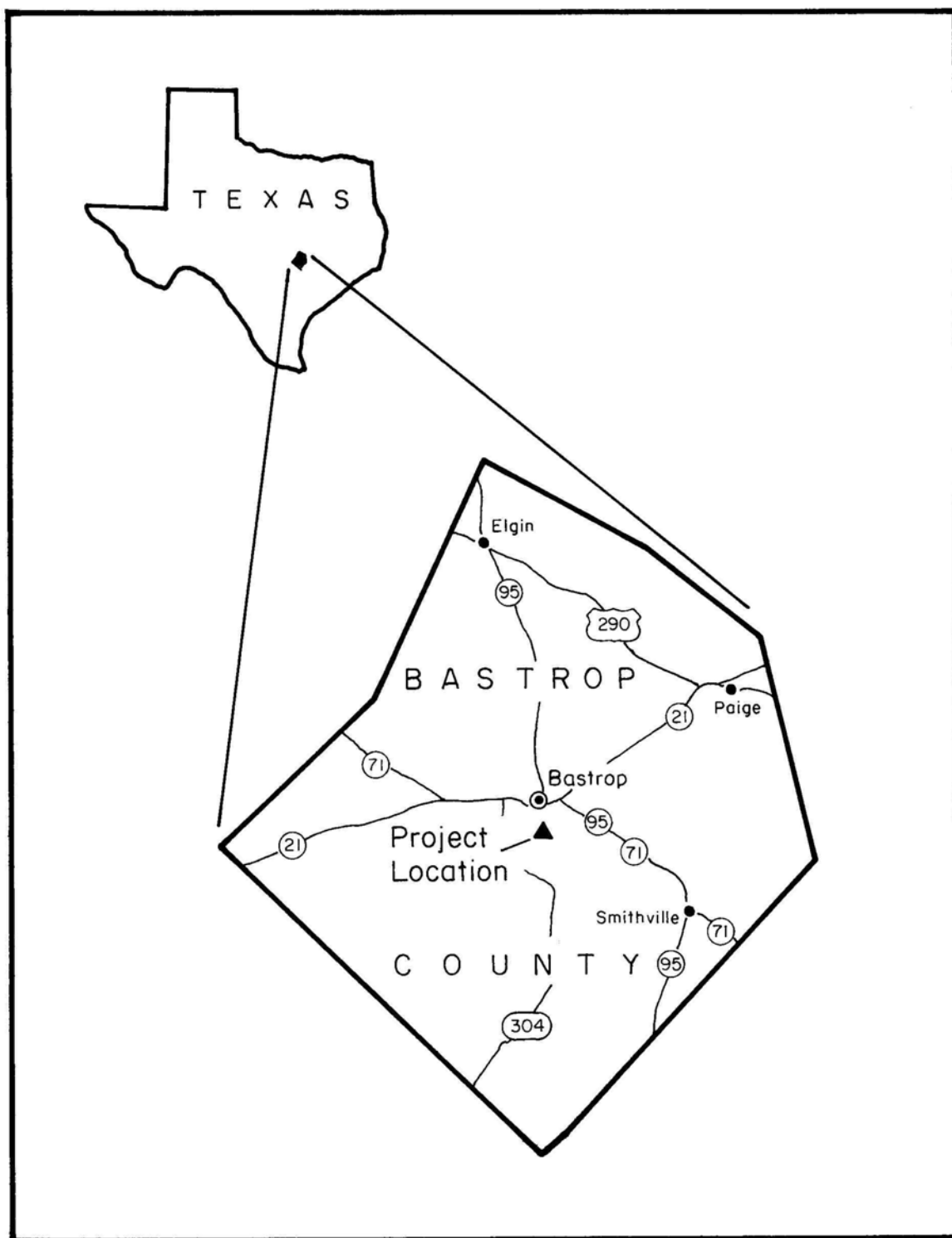


Figure 1. General Location



Figure 2. Project Area on Topographic Map

ENVIRONMENTAL BACKGROUND

Bastrop County is located in the southwestern portion of Central Texas just to the south and east of the Balcones Escarpment. It is bounded on the north and northeast by Lee and Williamson counties, on the southeast by Fayette County, and on the northwest by Travis County. It contains 890 square miles of land not submerged by water and is ranked number 162 in this category (Moore 1975). Geographically, it is situated on the Texas Gulf Coastal Plains with influence from such specific regions as the Post Oak Belt and the Blackland Belt. The county belongs to two plant life regions. These are the Secondary Forests and Woodlands and the Blackland Prairies. The first life region, which is composed of Blackjack, Oak, Elm, Pecan, and other trees, dominates the county. Included within this region is an isolated pocket of trees known as the "Lost Pines" because of their separation from the natural pine regions of East Texas. There are referred to as a Relict Forest, or one that is a vestigial remnant of a former greater forest (Moore 1977:2). The Blackland Prairie occupies only the extreme northwest portion of the county. Even though it is called a prairie, it has much timber, especially along the waterways that drain the county. These include species of oaks, pecans, elms, mesquites, and Bois d'arc. The soils that drain these streams vary from rich alluvial soils along the streams, black waxy soils on the prairies, to sandy loams on the uplands. Two different underground water formations are located in the county. They are the Carrizo Sand and Wilcox Group in the southern part of the county, and the Alluvial and Bolson Deposits in the remainder of the county. The Colorado River and its tributaries drain most of the county. Some of the larger streams which are fed by springs, even during droughts, are Alum, Cedar, Sandy, Piney, and Walnut creeks. A small part of the county is drained by Yegua Creek, a tributary of the Brazos River. The climate of the county is that of Dry Subhumid with the annual potential evaporation exceeding the annual precipitation. This results in mild winters and hot summers. The elevation of the county varies from nearly flat to hilly. Altitudes range from 270 feet to 687 feet.

The project area is located on the north bank of the Colorado, approximately two miles south of the town of Bastrop. The property consists of a strip of land approximately 30 acres in size that varies in width from 200 feet to 600 feet. Specifically, it is located on a lowland terrace in a mature riparian zone. These lower terrace areas along the river contain mature trees such as Cottonwood, Mesquite, Pecan, Live Oak, Willow, Elm, Hackberry, Ash, Sugarberry, Tamarisk, Hickory, Cedar (Juniper), Honey Locust, and Loblolly Pine. The understory in these terraces consists of Yaupon, Grapevine, Greenbriar, Poison Ivy, Little Bluestem, Big Bluestem, Indiangrass, Sideoats, Grama, Purpletop, Tall Dropseed, Sedge, Switchgrass, Beaked Panicum, Virginia Wildrye, Rustyseed Paspalum, White Tridens, Eastern Gamagrass, Canada Wildrye, Texas Wintergrass, Maximilian Sunflower, Heath Aster, Goldenrod, Broadleaf Unida, and Giant Cane (Driver 2006:4).

The project area is depicted on Sheet 29 of the *Soil Survey of Bastrop County* (Baker 1979). According to the survey, there is only one soil type located in the project area. This is Shep clay loam, 3 to 8 percent slopes, eroded (SeD2). In general, SeD2 soils are described as well drained with medium runoff. Soils in the Shep series are found along major drainages and are severely eroded. The native vegetation of this series consists of mid and short grasses (Baker 1979:24). At the time of this study, the project area contained various hardwoods such as American Elm, American Sycamore, cottonwood, Hackberry, and black willow. Other plants present were mustang grape, poison ivy, Virginia creeper, greenbriar, western soapberry, common elderberry, giant ragweed, trumpet creeper, inland sea-oats, Johnson grass, and switchgrass (Tom Dureka personal communication).

ARCHAEOLOGICAL BACKGROUND

The project area lies within the Central Texas archeological region. This area has been the subject of extensive research, which has enabled the compilation by researchers of well-documented chronological sequences (Suhm et al. 1954; Weir 1976; Prewitt 1985). The majority of these divide human occupation into four broad stages: Paleoindian, Archaic, Late Prehistoric, and Historic. These stages are based on a proposed sequence of subsistence strategies as they are revealed through the archeological and historical record (Driver 2006:5).

Paleoindian Stage

The Paleoindian Stage is the earliest period of human occupation known to occur in Texas. This stage began circa 10,000 B.C. and lasted until circa 6600 B.C. (Prewitt 1981). Paleoindians are also known for distinctive projectile points such as *Clovis* and *Folsom*. According to Willey and Phillips (1958:80), problems exist with the term PaleoIndian. The term PaleoIndian typically refers to those cultures that were oriented toward big game hunting with food collecting not a major pursuit. Eileen Johnson (1977:65-77) states that it has been erroneously stereotyped as a migratory systematic big game procurement adaptation. Collins (1995:381) argues that subsistence in Clovis times, for example, PaleoIndians exploited a diverse fauna base that not only included large herbivores such as mammoth, bison, and horse but also included smaller animals such as water turtles, land tortoises, alligator, mice, badger, and raccoon. At Kincaid Rock Shelter, a paved floor suggests that the inhabitants of this site returned to the same site as part of a regular hunting and gathering strategy in contrast with nomadic hunters who only pursued big game. It is, therefore, assumed that an array of plants presumably also constituted part of Clovis subsistence (Collins 1990; Collins et al. 1989)

According to Skinner et al. (1981:13), the Paleo-Indian period is one of the least understood time periods in Central Texas prehistory, primarily because few sites have been excavated. Evidence of this period often occurs in the form of surface collected materials found over much of Central Texas. At Fort Hood, this period is represented by distinctive projectile points found in multi-component surface sites and as isolated finds (Carlson et al. 1986:15). These early sites are often found on old terraces of major river drainages and may be more distant from major streams than some more recent occupations (Bryan 1931). Some rock shelters, such as the Levi site, were intensively occupied even though they are located a considerable distance from major rivers. The only example of a rock shelter in Central Texas immediately adjacent to a major drainage known to contain Paleo-Indian occupation is the Horn Shelter (41BQ46) in Bosque County (Redder 1985).

Archaic stage

The Archaic represents a broad cultural time period that lasted from approximately 8500 Before Present (B.P.) to 1250 B.P. in Central Texas. According to Prewitt (1981:71), "The Archaic Stage dominates all other remains in Central Texas." Prewitt (1981) has subdivided the Archaic into eleven phases. LeRoy Johnson (1987) has questioned the validity of the phase concept as used by Prewitt, especially the phases occurring before the Middle Archaic. These have been grouped into Early, Middle, Late, and Terminal periods by Carlson et al. (1986:15). According to Prewitt (1981:77-78), during the Early Archaic there was a "strong orientation toward the gathering aspect rather than the hunting, and a mobile population was of low density." This occurred during the Circleville, San Geronimo, and Jarrell phases (8500 B.P. - 5000 B.P.). In the Middle Archaic, food gathering had become very specialized as evidenced by the presence of numerous burned rock middens/mounds (Prewitt 1981:78-80). The Middle Archaic is seen by Prewitt to have taken place during the Oakalla, Clear Fork, Marshall Ford, and Round Rock phases (5000 B.P. - 2600 B.P.). An overall decrease in burned rock middens took place during the Late Archaic. Bison were important as a food resource, but did not dominate subsistence activities (Prewitt 1981:80-81). The Late Archaic occurred during the San Marcos and Uvalde phases (2600 B.P. - 1750 B.P.). The Terminal Archaic, according to the classification by Carlson et al. (1986), includes the Twin Sisters and Driftwood phases (1750 B.P. - 1250 B.P.). An increase in the importance of gathering and an apparent peak in site density seem to have occurred during Prewitt's (1981:82) Driftwood phase.

Late Prehistoric Stage

This period has been referred by some as the Neo-American Stage (Suhm et al. 1954), Neo-archaic (Prewitt 1981), and Post-Archaic (Johnson and Goode 1994). Technological changes are the primary distinguishing characteristics of this stage. The Austin (1250 B.P. - 650 B.P.) and Toyah (650 B.P. - 200 B.P.) phases belong to this stage of prehistory. During this time arrow points first appeared as well as ceramics and possibly horticulture. According to Collins (1995:385), there is now evidence that only the bow and arrow appeared initially in Central Texas; pottery was added later, and agriculture developed last and was of minor importance. Because Late Prehistoric groups continued to practice hunting and gathering, a division or two sub-periods seem to have taken place. These are referred to as early and late by Collins (1995:385) with the break between the long-standing Archaic period and the Late Prehistoric period occurring at circa 800 B.P. when the Toyah Focus replaced the Austin Focus as the prevailing archeological manifestation. The most obvious change that emerged at the beginning of the Late Prehistoric period is the introduction of the bow and arrow and decreased use of the *atlatl* or spear thrower. Otherwise, subsistence lifeways in the Late Prehistoric were probably little different from those in the earlier Archaic period (Prewitt 1981:74; Weir 1976). One Late Prehistoric site (41BP3) in the county has produced burials. Diagnostic artifacts associated with the remains include *Perdiz* and *Scallorn* arrow points.

Historic Stage

By the time the Europeans reached Bastrop County, the area was inhabited by the Tonkawa Indians. During the 17th and 18th centuries, their numbers were reduced considerably by introduced diseases from Europeans and the extermination policies of the warlike Comanches who lived to the north. Although this tribe was at its peak when first encountered by the Europeans, they declined rapidly due to the reasons cited above. The Tonkawa often allied with Anglo settlers and served as scouts against their enemy, the Comanche. Battles between the Comanches and Anglo residents of Bastrop County are documented in a book by J. W. Willbarger entitled *Indian Depredations in Texas*. Willbarger lived in Bastrop County during its early days and documented the various conflicts between the Indians and Anglos that occurred in the area. There are no sites in Bastrop County that can be associated with the Tonkawa.

The first recorded events in Bastrop County were those of the Spanish and French explorers. In 1691, an expedition under the joint command of *Don Domingo Teran de los Rios* and Father Manzanet left the province of Monclova, Mexico and passed through Bastrop County marking the beginning of continuous activity in the area. They crossed the Colorado River just to the south of Pecan Street and Chestnut Street in a residential area of the town of present-day Bastrop. According to the *Handbook of Texas* by Walter Prescott Webb, the first settlement on the Colorado River was established in 1805, also in what is now Bastrop. A fort called *Puesta del Colorado* was constructed to protect the increasing amount of commerce on the *El Camino Real*. The next reference to Bastrop County is that of the journey of Zebulon Pike in 1807 while on an investigation for the United States government to investigate the Colorado River. He arrived at the crossing of the river at Bastrop and tells of seeing a fort there manned by Spanish Dragoons. Around the fort were lodges of Indians whom he called Tancards (probably Tonkawa). The next major event in Bastrop County was that of Moses Austin and his colonization program for Texas. Moses Austin is given credit for initiating the colony system in Texas with help from Baron de Bastrop. When Moses Austin died, his son Stephen Fuller Austin took over and fulfilled his father's dreams of bringing colonists to Texas. In 1827 and 1831, Stephen F. Austin was awarded land grants for the area. Bastrop was established as a town in 1830 (Moore 1977) and became the county seat in 1837 by the Congress of the Republic of Texas (Moore 1975). The town on the river was named Mina by Austin in honor of one of Mexico's heroes. In order to bring prosperity to the area, a road from San Felipe de Austin and Mina was constructed by James Gotier in 1830 and known as the Gotier Trace. The town grew quickly and the population became largely Anglo-American. Mina was renamed Bastrop, probably in honor of Baron de Bastrop who played a large part in the creation of this settlement.

PREVIOUS INVESTIGATIONS

The Colorado River is one of the largest Rivers in Texas. Therefore, it is reasonable to expect that significant archaeological sites are present along its banks. Gravel deposits are present on sand bars in the river and in the uplands where they were deposited during ancient flooding episodes. These gravels were used in prehistoric times for the manufacture of stone tools. There are only five recorded archaeological sites in close proximity to the current project area. They are 41BP312, 41BP638, 41BP640, 41BP641, and 41BP642, and they are located in the uplands just to the north of the project area. Site 41BP312 was recorded by archaeologists working for the Texas Archeological Survey in 1986 (Robinson 1987) in 19 dispersed areas. This was the largest survey in the area and consisted of an examination of 3400 acres in the uplands and along the lower terraces next to the river to the south and east of the current project area. A surface inspection of the project area revealed the presence of various stages of bifaces, debitage, and large numbers of burned rock. The size of this site was estimated to be 21,200 square meters. According to the site form, chipped stone tools were collected and are part of the personal collection of the landowner. Sites 41BP638 and 41BP640 – 41BP642 were recorded by archaeologists from the Lower Colorado River Authority in 2001 and 2002 during a survey for the Tahitian Village Phase II Wastewater Pipeline Project (Prikryl and Malof 2002). These sites are described on the site forms as “Unknown Prehistoric” as they lack diagnostic artifacts. The most recent survey in close proximity to the current project area was performed by archaeologists from Moore Archeological Consulting (Driver 2006). This project was a survey of a 28-acre tract of the lower terrace and uplands overlooking the north bank of the Colorado River. The eastern edge of their project area ends at the western edge of the current project area. Construction plans called for the rehabilitation of existing trails, a parking area, and interpretive signs. No sites were recorded. This survey is particularly relevant to the current project because it investigated the floodplain and lower terraces in the same setting as this study.

METHODS

Prior to entering the field, the Principal Investigator checked the site records at the TARL on the campus of The University of Texas at Austin for the presence of previously recorded sites in the project area and vicinity and examined the topographic maps submitted by the engineers. No sites were found to be in the project area, and there was no indication that this area had been surveyed by a professional archaeologist. In addition, a review of relevant literature was conducted in order to be familiar with the kinds of sites expected to occur in the area. The entire area was subjected to a 100% Pedestrian Survey augmented by shovel testing. All dirt excavated during shovel testing was screened through ¼ inch hardware cloth, and shovel test data was documented through in the field notes and on a shovel test log (Appendix I). Selected segments of the project area were documented through digital photography. We had intended to use a hand-held GPS to obtain UTM coordinates to plot shovel tests. Unfortunately, we were unable to get a satellite connection. Therefore, shovel tests were plotted using the high quality aerial photographs provided by the client. The location of these tests is depicted in Figure 3. Specific field methods by area are presented below.

Area 1

Area 1 consists of approximately five acres and is located at the western end of the project area (Figure 3). This is where the ADA trails will be constructed that will impact the subsurface to a depth not greater than 12 inches (30.48 cm) below the existing surface. The area was thickly wooded, but the surface visibility was poor to fair due to a mantle of leaves. This is the widest part of the project area and consists of a floodplain and slopes that lead to the road above (Riverside Drive). At the edge of the river is a narrow natural levee that is evidence of flooding. Area 1 is bounded on the north by Riverside Drive, on the south by the river, on the east by Area 2, and on the west by the Pines and Prairies Land Trust. Bollard and cable fencing will be installed to keep vehicular traffic from entering this area from the entry road. Five shovel tests were excavated in all three aspects of the landscape: floodplain, terrace, and flood-deposited, overbank natural levee sediments. The soil was a clay loam over clay in all but one test. Shovel Test 5 was excavated in an area of flood-deposited, overbank natural levee sediments that contained a fine sandy loam. The depth of the tests met or exceeded the depth of disturbance according to the specifications provided by the client. Roger G. Moore is shown excavating Shovel Test 1 (Figure 4).

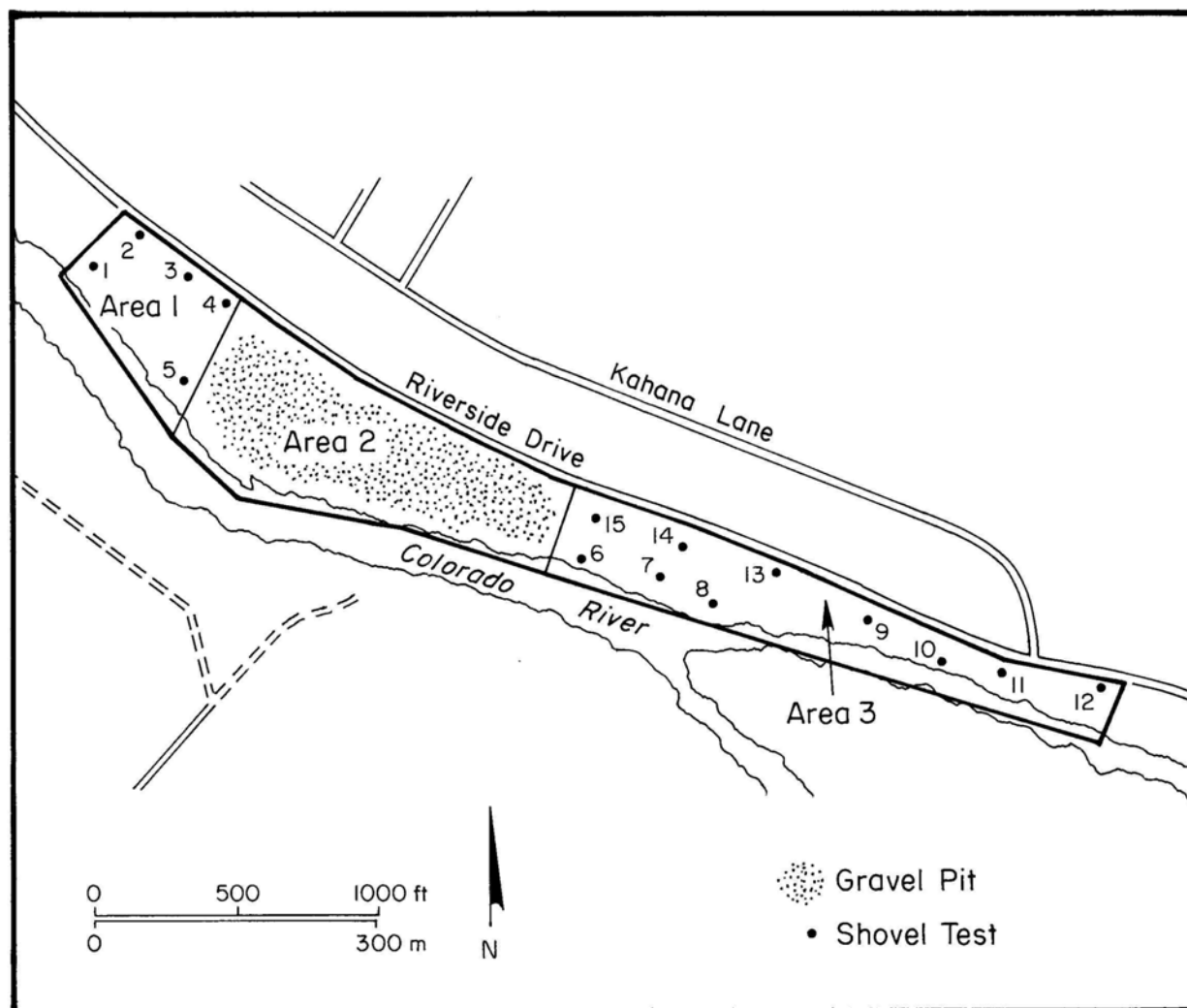


Figure 3. Location of Shovel Tests



Figure 4. Shovel Test 1

Area 2

Area 2 consists of approximately fifteen acres and is located in the center of the project area (Figure 3). No trails are planned in this area. The only construction planned is the improvement and maintenance of the entry road. This area was severely disturbed through quarrying for gravel (Figure 5). It is bounded on the north by Riverside Road, on the south by the river, on the east by Area 3, and on the west by Area 2. No shovel tests were dug in this area. Surface visibility was good in much of this area, and numerous gravels were observed. However, they were generally small and not suitable for the manufacture of stone tools.



Figure 5. Area 2

Area 3

Area 3 consists of approximately ten acres and is located at the eastern end of the project area (Figure 3). This is where the low impact trails will be constructed. The area was thickly wooded, and the surface visibility was poor to fair due to leaf cover (Figure 6). This is the most narrow part of the project area consists of a floodplain and slopes that lead to the road above (Riverside Drive). At the edge of the river is a narrow natural levee that is evidence of flooding. This area is bounded on the north by Riverside Drive, on the south by the river, on the east by private property, and on the west by Area 2. Bollard and cable fencing will be installed to keep vehicular traffic from entering this area from the entry road. Ten shovel tests were excavated in all three aspects of the landscape: floodplain, terrace, and flood-deposited, overbank natural levee sediments. The soil was clay at the surface in the five shovel tests dug on terraces and in the floodplain.



Figure 6. Area 3

Five tests were dug in flood-deposited, overbank natural levee sediments containing sandy soils, and five tests were dug in the floodplain and on terraces where firm clay was present. Since the low impact trails will not affect the subsurface, these shovel tests exceeded the APE in this area. Evidence of past flooding episodes was observed in the form of trash on the surface and in the trees (Figure 7). The natural levees appeared to contain deep sand that would have been laid down by flooding as well.



Figure 7. Flood Debris in a Tree

RESULTS AND CONCLUSIONS

The archival research indicated no previously recorded archaeological sites in the project area. No archaeological sites were found as a result of this survey. Although it is possible that short-term activities associated with gathering of local plants; hunting of small game; and exploitation of resources associated with the river were conducted in the project area, evidence of these activities is not likely to be preserved unless deeply buried in the floodplain. The most likely location for a campsite is on the first terrace above the project area. Gravel lenses were observed in a bluff not far from the project area and on a sandbar in the river. These areas may have been utilized by prehistoric groups seeking suitable raw materials that they could use to fashion stone tools. The survey was performed in accordance with the Minimum Survey Standards as published by the Texas Historical Commission, Archeology Division.

RECOMMENDATIONS

Since no archaeological sites were found in the project area, it is recommended that construction be allowed to proceed in this area as planned without further consultation with the THC. Should evidence of an archaeological site be found in the project area during construction, all work in the area of the find must cease until the situation can be evaluated by the THC in consultation with Environment Stewardship, Inc. and BVRA. Also, if the depth of construction is changed the THC must be notified as this may require additional survey.

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APPENDIX I
SHOVEL TEST LOG*

Shovel Test	Area	Depth (cm**)	Soil	Comments
1	1	40	clay loam	floodplain
2	1	30	clay loam	terrace
3	1	35	clay loam	floodplain
4	1	31	clay loam	floodplain
5	1	40	sandy loam	levee
6	3	35	sandy loam	levee
7	3	40	sandy loam	levee
8	3	37	sandy loam	levee
9	3	35	clay	terrace
10	3	31	sandy loam	levee
11	3	35	sandy loam	levee
12	3	30	clay	terrace
13	3	30	clay	terrace
14	3	33	clay	floodplain
15	3	15	clay	floodplain

*all tests were negative

**below ground surface