

## **Archaeological Survey for Ingram Hills Park Improvements, San Antonio, Bexar County, Texas**



by

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April 2005

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**ABSTRACT**

At the request of the City of San Antonio, Parks and Recreation Department, Anthony & Brown Consulting conducted an archaeological survey for proposed improvements at Ingram Hills Park located in northwest San Antonio. Proposed improvements include concrete walkways, picnic units, water and electrical services as well as a future basketball court, playground, pavilion and pole lights. The survey consisted of a 100% pedestrian walkover of the approximate 3.25-acre park area and six backhoe trenches to assess the possibility for buried, intact cultural remains. The trenching verified the extent of the two to six feet of fill over the park area. The intact clay below did not contain any signs of cultural resources. Therefore, clearance is recommended for all park improvements. Because no cultural remains were found, there are no artifacts to curate. In addition, all notes have been incorporated into the report along with relevant digital photos.

#### ACKNOWLEDGMENTS

Several people were helpful during the project. Thanks are due to Mark Wittlinger for his help providing maps and information about the park. Cavan McCarthy and his staff were most helpful in undertaking backhoe trenching at the site within a relatively tight timeline. Mark Willis helped to locate map resources and translate computer files for the project.

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## INTRODUCTION

At the request of the City of San Antonio, Parks and Recreation Department, Anthony & Brown Consulting conducted an archaeological survey for proposed improvements at Ingram Hills Park in northwest San Antonio. The park is located on Majestic Drive just south of where it crosses an unnamed tributary of Zarzamora Creek. Among the current planned improvements are a trail around the perimeter of the 3.25 acre park, a drinking fountain, and a bench set on a concrete pad. Future improvements will include a basketball court, a pavilion area, a small playground, and three picnic benches. Lighting will also be added in the basketball court and playground areas. The location of Ingram Hills Park is shown in Figure 1.

Because the park is City of San Antonio property, it is subject to the provisions of the Texas Antiquities Code, now subsumed in Title 13, Part II of the Texas Administrative Code. This legislation defines the necessary conditions for recognition and preservation of State Archeological Landmarks (SALs) and requires that any political subdivision of the State of Texas, defined as a "local governmental entity created and operating under the laws of this state, including a city, county, school district, or special district created under the Texas Constitution, Article III, §52(b)(1) or (2), or Article XVI, §59" in 13 TAC §26.5 of the code, must identify potential SALs through survey of public lands prior to actions which could potentially damage those SALs. The code's provisions are administered by the Texas Historical Commission (THC) Division of Archeology. Archaeological survey requires a permit issued by the THC in accordance with the provisions of the code. The Ingram Hills Park improvements survey was conducted under Permit #3725, issued to Principal Investigator Dana Anthony.

The survey conducted by Anthony & Brown was designed to be in compliance with appropriate archaeological survey methods as defined in the Department of the Interior's Standards and Guidelines (National Park Service 1983), the survey standards developed by the THC in conjunction with the Council of Texas Archeologists (Texas Historical Commission n.d.), and the guidelines of the Council of Texas Archeologists (CTA 1987). The primary intent of the survey was to identify and describe any cultural resources located within the project area, evaluate the suitability of such resources for formal designation as SALs, should sites be located, and to make recommendations for future cultural resource management options such as avoidance, preservation, or further investigations if necessary.

The field work was conducted on 6 and 7 April 2005 by Dana Anthony and David Brown who expended a total of 3 person days including travel. A backhoe and operator were provided by the Parks and Recreation Department on 7 April.

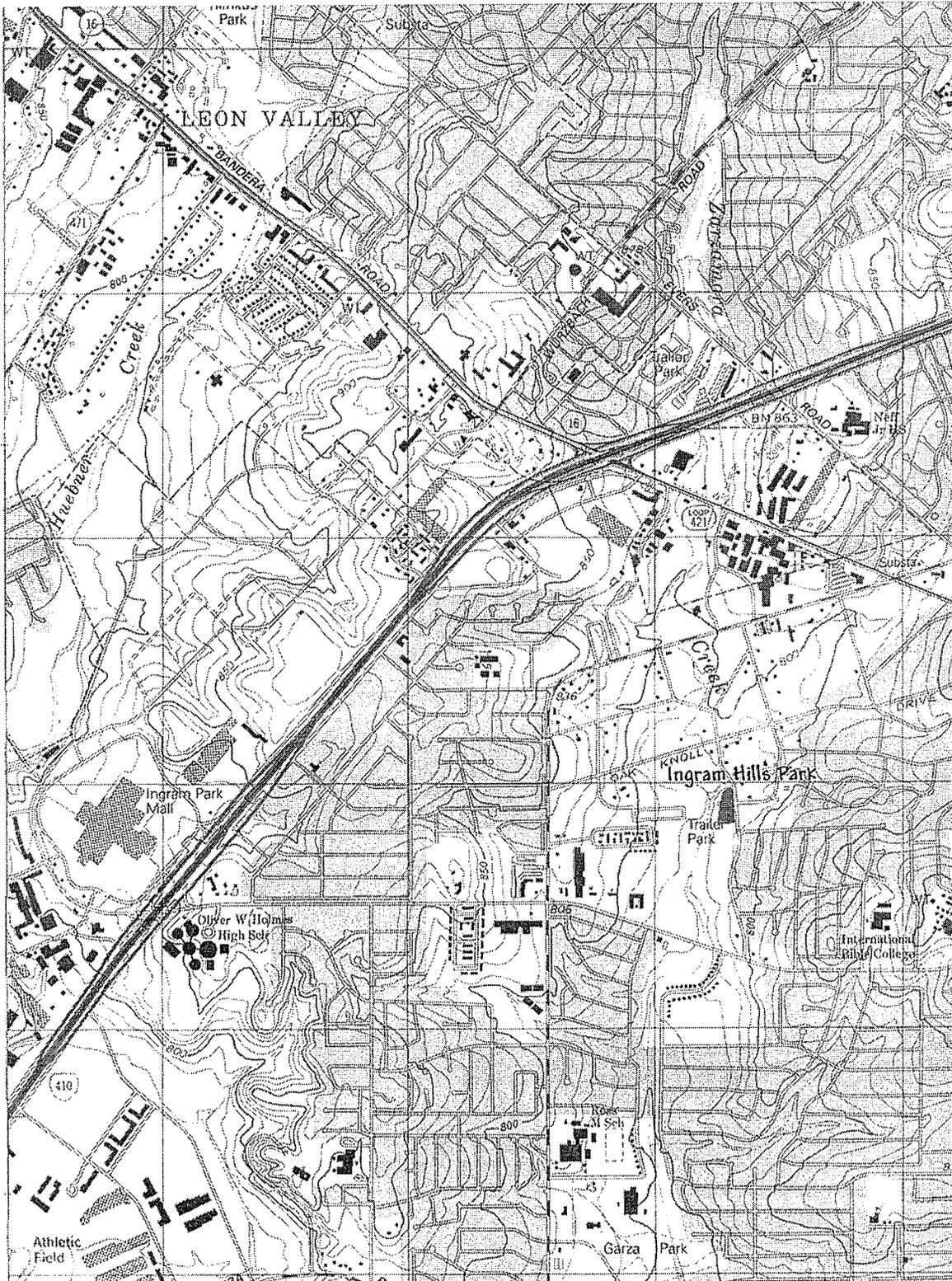


Figure 1. Section of San Antonio West USGS quad showing Ingram Hills Park project area.

## ENVIRONMENTAL SETTING

The project area is located in San Antonio, in west central Bexar County. The park lies along Zarzamora Creek within Loop 410 and between Ingram and Bandera Roads. This is now a highly developed area within the northwestern city limits. Zarzamora Creek, the primary drainage of this area, is now completely channelized as is a small tributary that joins it at the north end of the park (Figure 2). The main channel area is as much as 60 meters across and as deep as 6 to 8 meters. The actual channel of the creek runs along the center of this broad artificial channel area. The creek, flowing south, becomes Apache Creek that together with Alazán Creek creates San Pedro Creek at their confluence, eventually flowing into the San Antonio River.



*Figure 2. Channelized valley of Zarzamora Creek looking south from park area.*

Bexar County lies along the boundary between the Edwards Plateau section of Fenneman's (1931) Great Plains Physiographic province and the extreme northern edge of the West Gulf Coastal Plain section of the Coastal Plain physiographic province (Fenneman 1938). The Ingram Hills Park area lies below the highly dissected southern edge of the escarpment where a series of rivers flowing from the southern Edwards Plateau form fans or outwash plains of calcareous sediments derived from the Cretaceous limestones.

The climate of Bexar County is subtropical with mild, dry winters and hot, humid summers. Rainfall is fairly uniform throughout the year but heaviest rains fall in spring and early summer and the month of September (Taylor et al. 1966:118-121). Mean annual rainfall is 27.89 inches.

The geology of the general area of San Antonio and Bexar County is quite complex but the sediments north of town trend from northeast to southwest, essentially following the Balcones Escarpment. Included here are the lower Cretaceous deposits, Glen Rose and Edwards, while traveling further southward the deposits are upper Cretaceous, Pecan Gap Chalk and Navarro Group and Marlbrook Marl ("upper Taylor Marl") undivided. Continuing south, recent Holocene sediments underlie much of the southern part of the city with lower Eocene deposits south of town extending onto the coastal plains (Barnes 1983).

The park area itself is mapped as being underlain by the Upper Cretaceous Pecan Gap Chalk (Barnes 1983). Outcrops of a weathered caliche or chalk can be seen at the base of the channelized drainage bank of Zarzamora Creek within the project area (Figure 3). This formation is described as

*chalk and chalky marl, more calcareous westward, very light yellow to yellowish brown, weathers to form moderately deep soil, seldom exposed; Exogyra ponderosa common; thickness 100-400 feet...* (Barnes 1983).



Figure 3. Outcrop of Pecan Gap Chalk exposed in bank of Zarzamora Creek in Ingram Hills Park area.

The park lies near the northern boundary of a broad area of Lewisville-Houston Black, terrace, soil association that extends across the interfluves between Leon Creek, the San Antonio River, and Salado Creek. These are described as deep, calcareous clayey soils former in old alluvium (Taylor et al. 1966). The association occurs where deposits of calcareous alluvium border the major streams and intermittent drainages and underlie old outwash plains. The lowest lying deposits adjacent to streams were washed out from surrounding uplands and are of recent geologic age. The thicker, higher deposits date to the Pleistocene epoch.

The mapped soils series within the park is Houston Black gravelly clay, 1 to 3 percent slopes (Taylor et al. 1966). This series consists of very deep, moderately well drained, very slowly permeable soils on nearly level to moderately sloping upland that formed from weakly consolidated calcareous clays and marls of Cretaceous age (NRCS 2005). The black clay surface layer is about 38 inches thick with gravel comprising 8 to 18 percent. Examples on narrow ridgetops may contain as much as 60 percent gravel (Taylor et al. 1966:21). Below this is a one-foot thick layer of clay or gravelly clay; gravel in this layer is discontinuous but where it occurs, it can be 30 to 60 percent of the volume. In addition to the dark, thick mollic epipedon, the soil is well known for its vertic features which include slickensides at a depth of 24 to 80 inches cracks that are 1/2 to 4 inches wide at 12 inch depths during dry periods. These soils are classified as fine, smectitic, thermic Udic Haplusterts (NRCS 2005).

In the park area, dredge spoil from the channelization of the creek has been placed on the surface to raise the park. As much as 6 feet of gravelly fill was observed atop the original soil surface in the south half of the park. Fill depths are shallower in the north half of the park. It is not clear when the channelization of the creek was undertaken but the image on the USGS digital orthophoto quad (DOQQ) appears to show the channelization completed below the confluence and lighter colored fill dumped on the south half of the park (Figure 4). Above the confluence, the creek had not yet been channelized by the time the aerial photo was taken on 7 January 1995.

The boundary between Blair's (1950) Balconian and Tamaulipan biotic provinces crosses northern Bexar County. The far northern portion of the county falls within the Balconian province that corresponds to the Edwards Plateau. Distinct in physiography and vegetation, the Edwards Plateau area has an aggregate vertebrate fauna but few endemic species (Blair 1950:112). The Balconian zone is more akin to a broad ecotonal region between the adjacent Chihuahuan, Austroriparian, Kansan, and Tamaulipan provinces. Ingram Hills Park and most of the southern half of the county falls within Blair's Tamaulipan province. The semiarid, megathermal Tamaulipan Province has a distinctive vegetation marked by brushy species which disappear or decrease notably north of the province boundary. The fauna includes a number of grassland species that range east and northward into the Texan and Kansan provinces as well as species that are found in common with the adjacent Austroriparian and Chihuahuan provinces. The Tamaulipan is unique among the Texas provinces in having a Neotropical element. Many of these species are more prominent at the southernmost tip of Texas that Blair (1950) suggests might be included within his suggested Matamoran district.

Three vegetation zones are mapped within Bexar County (Hatch et al. 1990:2). These include, from north to south, Edwards Plateau, Blackland Prairie, and South Texas Plains. Ingram Hills Park lies within the Blackland Prairie portion, though presumably with considerable influence from the nearby Edwards Plateau flora.

The Blackland Prairie (Hatch et al. 1990:12) is a rolling and well-dissected prairie that represents the southern extent of the grassy plains that extend from Texas to Canada. The tallgrass prairie that once existed was dominated by little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardi*), indiagrass (*Sorghastrum nutans*), tall dropseed (*Sporobolus asper* var. *asper*) and Silveus dropseed (*S. silveanus*). Common forbs include asters (*Aster* sp.), prairie bluet (*Hedyotis nigricans* var. *nigricans*), prairie-

clover and late coneflower (*Rudbeckia serotina*). While grassland vegetation dominates upland areas, oak (*Quercus* sp.), elm (*Ulmus* sp.), cottonwood (*Populus* sp.) and native pecan (*Carya illinoensis*) are common along drainages of the Blackland Prairie (Hatch et al. 1990:12).

Dominant tall grasses of the Edwards Plateau region include cane bluestem (*Bothriochloa barbinodis* var. *barbinodis*), big bluestem, indiangrass, little bluestem, and switchgrass (*Panicum virgatum*) with buffalograss (*Buchloe dactyloides*), sideoats grama (*Bouteloua curtipendula*) and Texas grama (*B. rigidiseta*) now found on shallow xeric sites (Hatch et al. 1990:14). Woody species along drainages include live oak (*Quercus virginiana*), sand shin oak (*Q. havardii*), post oak (*Q. stellata*), mesquite (*Prosopis glandulosa*), and juniper (*Juniperus* sp.).

The most common native arboreal species in the park today is the cedar elm (*Ulmus crassifolia*) with hackberry (*Celtis laevigata*) close behind. Only a few small pecans are present in the park area today, though species endemic to adjacent regions such as huisache (*Acacia smallii*), retama (*Parkinsonia aculeata*), mesquite, and persimmon (*Diospyros texana*) are common, as are introduced species such as Arizona ash (*Fraxinus velutina*), chinaberry (*Melia azederach*), and ligustrum (*Ligustrum vulgare*).

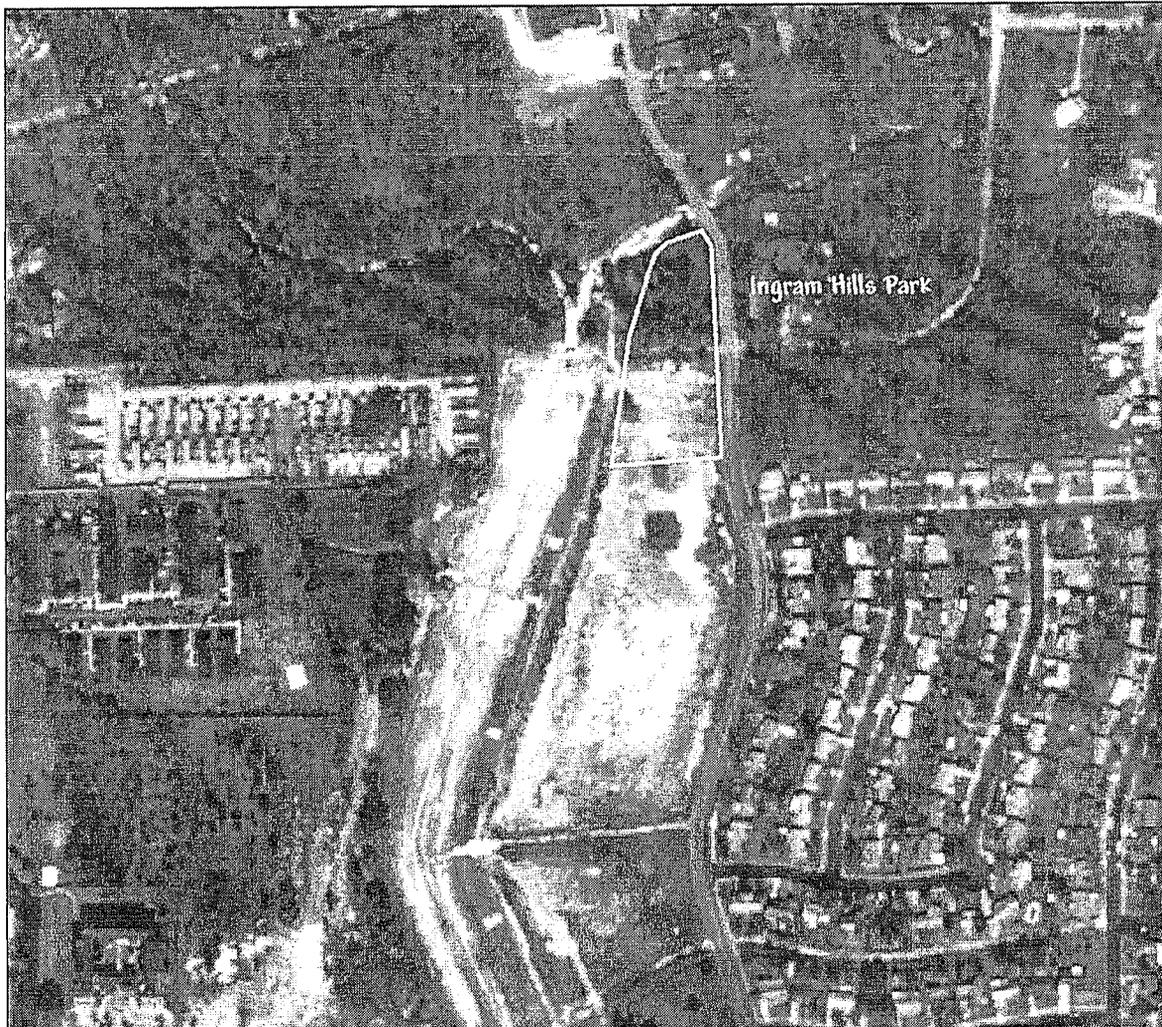


Figure 4. USGS Digital Orthophoto image of Ingram Hills Park area.

## CULTURAL SETTING

### CULTURE HISTORY

Located a few miles south of the Balcones Escarpment that forms the southern boundary of the Edwards Plateau in this area, Ingram Hills Park lies along the border of two major cultural regions, the South Texas Plains and the Central Texas area. In addition, there was occasional influence from the Lower Pecos cultural region as well as from the coastal plain areas to the southeast. Though much remains to be learned from the archaeology of this broad region, a number of important studies have been to sort out the details of the prehistoric past in these areas. Building on early syntheses by Sayles (1935) and Suhm et al. (1954), more recent studies, including Black (1989b) and Hester (1995) for South Texas, Black (1989a), Johnson and Goode (1994), and Collins (1995) for Central Texas, and Turpin (1995) for the Lower Pecos region, have honed the culture history syntheses of these regions.

Also important to an understanding of culture history in the region are various studies of the paleoenvironment by archaeologists, geologists, and palynologists. These include studies by Bryant (1977), Bryant and Shafer (1977), Baker and Pentead-Orellana (1977), Hall (1982, 1990), Bryant and Holloway (1985), Holloway et al. (1987), Blum and Valastro (1992), Toomey et al. (1993), Nordt et al. (1994), Blum et al. (1994), Johnson and Goode (1994) and Ellis et al. (1995).

The culture history of South and Central Texas is generally divided into four stages, the Paleoindian, the Archaic, the Late Prehistoric and the Historic, originally defined by Suhm et al. (1954), but subsequently modified by numerous authors. In Central Texas, the long prehistoric period has been divided and redivided by many archaeologists, including early attempts by Kelley (1947), Johnson (1967), and Weir (1976). One of the most finely subdivided and most widely utilized chronological schemes of recent years was put forth by Prewitt (1981, 1983) whose work was built upon the earlier syntheses. Prewitt's scheme was subsequently criticized for problems with terminology, dating and the primary association of type artifacts by Black and McGraw (1985), Johnson (1986), and Black (1989a) among others. Some of the most recent Central Texas chronological schemes, such as Johnson and Goode (1994) and Collins (1995), have sought to avoid these pitfalls. In South Texas, on the other hand, numerous authors have sought to define phases or finer subdivisions of the prehistoric record but few have been widely accepted and the original four part chronological division, with a tripartite subdivision of the Archaic into Early, Middle and Late, is still the most widely accepted.

The Paleoindian stage originally included the earliest inhabitants of the New World who spread across the American continent in the waning years of the Pleistocene era. Recent pre-Clovis finds, such as the site of Monte Verde in southern Chile (Dillehay 1989), have significantly altered the chronology of New World occupation. Evidence for such early cultures has not been forthcoming in Central Texas, however (see discussion in Collins 1995: 380-381).

Paleoindian cultures are typically identified by their distinctive lithic technology, including well-made projectile points such as *Clovis*, *Folsom*, *Plainview* and a wide range of related lanceolate forms. Primary site types include open sites and rockshelters, with evidence of general occupation as well as specialized activities such as stone tool making, hunting and game processing. Stone artifact caches and human burials have also been found which date to the Paleoindian era. In the past, the Paleoindian peoples have been typically characterized as a nomadic big-game hunting culture, but considerable recent evidence suggests a much broader range of subsistence activities within a rich and complex cultural tradition.

Overall, the Paleoindian era is one that is marked by a gradual warming trend at the close of the final Pleistocene Wisconsinian glaciation. This warming trend is associated with a dramatically shifting faunal and floral environment, to which the various cultural traditions quickly adapted. Sites of the earliest Clovis

peoples, dated between 11,200 and 10,900 BP (Haynes 1992, cited in Collins 1995), include remains of many now-extinct Pleistocene megafauna, including, camel, giant sloth, mammoth and mastodon, as well as numerous smaller species. In spite of the megafaunal associations, the Clovis economy seems to have been more diverse than previously thought. Subsequent Folsom peoples, on the other hand, were more devoted to big-game hunting pursuits; numerous Folsom sites are associated with the remains of the extinct bison: *Bison antiquus*. The later Paleoindian period, characterized by a number of lanceolate point types, also represents a diverse subsistence adaptation, but one that maximizes exploitation of modern bison, *B. bison*.

The earliest Archaic stage cultures, now dated as beginning between about 9,000 to 8,000 BP in the adjacent cultural regions, are distinguished from the previous Paleoindian stage by a hypothesized broadening of the subsistence base as well as increasingly regionalized stone tool stylistic traditions (although certain general style traits are widely spread during the earliest subperiods). Site types include both rock shelters and open sites. In addition to generalized campsites that contain artifacts representing a wide range of activities, there are numerous specialized site types, including quarry sites, lithic production sites, rock oven sites, and cemeteries.

The Archaic stage has been divided and subdivided many times and the final configuration is far from written. Most classificatory schemes use a basic tripartite Early, Middle and Late division which is then subdivided into smaller phases, periods, patterns, or intervals. The Early Archaic, marked by a proliferation of new projectile point styles, the earliest of which resemble Paleoindian lanceolate points in style and technology, and diagnostic tools such as Guadalupe gouges and grinding stones which may reflect the wider range of subsistence activities hypothesized for this period. This period is marked by a notably warmer and drier climate than the Late Pleistocene. Bison are absent from Central and South Texas at this time though bison exploitation continued apparently unabated on the southern High Plains. Subsistence pursuits were generalized throughout the southern and eastern margins of the area.

The Early Archaic has traditionally been defined as a transitional post-Paleoindian period in all three regions, dated by the disappearance of the bison from the region and the rise of more generalized economies. The cultural characteristics and dating of the Middle Archaic have been less certain, however, and interpretation and dating of the period have changed substantially over the years. In Central Texas, Prewitt's (1983) Middle Archaic is now generally included in the Late Archaic while the latter phases of his Early Archaic chronology are included by Johnson and Goode (1994) and Collins (1995) as Middle Archaic. Johnson and Goode (1994) date this period to a brief 1300 years beginning roughly 5500 BP. Hester (1995: 438) begins the South Texas Middle Archaic somewhat closer to the more traditional date of 4500 BP.

Debate over climate change and its significance has affected the definition of this period. On the southern plains, Johnson and Holliday (1995) have associated the High Plains Middle Archaic directly with the Altithermal which they date to between 6500 and 4500 BP. In the most recent interpretations of Central Texas prehistory, the earliest part of the Middle Archaic period, dated around 6000 BP, seems to reflect a brief shift to a cooler and more mesic climate, marked by the reappearance of bison. Some of the cultural traits from this early period may have been introduced from other regions, through movement of peoples or wider trade networks. Not long after, though, the Altithermal comes to Central Texas and one of the driest periods of the Holocene ensues. Bison are absent from Central Texas and the Lower Pecos during this late subperiod. Overall, the latter part of the Middle Archaic seems to be marked by increasingly specialized regional economies and stylistic traditions. At this time, a unique site type, the burned rock midden, the remains of superimposed subterranean rock ovens and oven debris, appears throughout the central and southern portions of the region.

The recently expanded Central Texas Late Archaic is divided into two subperiods by Johnson and Goode (1994) who place the first half, the Late Archaic I, coeval with their drier Edwards Interval paleoclimate. This early Late Archaic period is marked by the explosion in burned rock midden sites, while

near the end of the period, bison once again make their appearance. A population increase and possibly increasing social complexity have been postulated for what is now the early part of the Late Archaic period (Weir 1976). A return to slightly more mesic conditions may characterize the later Late Archaic of Central Texas, though there is no general concurrence on this (see comment in Johnson and Goode 1994:36-37). Bison are absent from Central Texas during at least part of this period.

Toward the end of the Archaic, population densities may have increased and connections may have been established between the hunter-gatherers of South and Central Texas and the complex cultures developing in surrounding regions. Large burial sites in some parts of south central and coastal Texas during the Late Archaic may indicate intensive reoccupation of certain sites or, possibly, increasing sedentism of the cultural groups. A proliferation of projectile point types during this latter period suggests increasingly differentiated regional cultures. During this period, Plains village cultures and ceramics make their first appearance on the high plains.

The final prehistoric period of Central and South Texas, the Late Prehistoric, is marked by the introduction of new technologies, including the bow and arrow and ceramics, as well as potentially new adaptive strategies. Site types are varied including open campsites, lithic scatters, and cemeteries. The earliest part of this period, the Austin interval, beginning about 1200 to 1300 BP, reflects a certain degree of cultural and economic continuity underlying the adoption of new technologies while the latter Toyah interval, extending roughly to the beginning of the historic period, may indicate the introduction of immigrants following a southward extension of the range of the bison.

Texas history begins with the arrival of the first Europeans, including possibly the expeditions sent by Francisco Garay, then governor of Jamaica, to the mouth of the Rio Grande between 1519 and 1523. The most famous early visitors, however, were Alvar Nuñez Cabeza de Vaca and the ill-fated survivors of the Narvaez expedition on the Texas coast in 1528. Little more than a decade after Cabeza de Vaca was shipwrecked on the Texas coast, Coronado and his expeditionary army were marching across West Texas and the southern Plains. The influences of European colonization were not felt strongly in the Central Texas region for several centuries, however.

While Alvar Nuñez Cabeza de Vaca, the first European known to have visited Texas, may have traveled to the San Antonio area, the first documented European visit was by Spanish expeditions exploring the area in the late 1600s. These expeditions, concerned about the threat of French incursions on Spanish territory, settled missionaries and soldiers in East Texas in 1690. The San Antonio River, the Medina River, San Pedro Creek, and many other local natural landmarks were first named by these early explorers. These explorers noted several native American groups living in what is today Bexar County and the surrounding region.

Little is known of the fate of the prehistoric inhabitants of South Texas during the historic era. Though a number of small groups have been documented in the early historic period of south, south central and coastal Texas, most disappeared very quickly from the written records. And little documentation exists for much of Central Texas during this early era. Puebloan and Southern Plains groups seem to have made early incursions into extreme northwestern Central Texas while Caddoan artifacts in various sites of the central and eastern margin attest to that group's presence in Central Texas. Along the eastern margins of Central Texas, plains groups like the Tonkawa and Wichita lived in villages along major streams; some of these groups probably ventured westward on seasonal bison hunts. In South Texas, Campbell (1988) has documented the available evidence on the Coahuiltecan bands that roamed this region.

The Apaches, one of the better-known Native American historic tribes in the region, were relative latecomers to Texas. This Athapaskan-speaking group appears to have migrated from Canada during the middle of the second millennium AD. While several Apachean groups have been identified with far West

Texas, the Lipan Apaches are known to have ventured into Central and South Texas as early as the seventeenth century. By the eighteenth century, the Comanche, a Shoshonian-speaking group, appeared in Central Texas, migrating south. The Comanche were mounted hunters and raiders from the northern Plains, feared by Europeans and Apaches alike. When the Comanche first appeared in Central Texas, the Apache sought shelter in Spanish missions (Richardson et al. 1981: 30-31). The conflict between Apache, Comanche, and Spanish raged for decades.

With increasing Anglo settlement of the South Texas area in the early to mid nineteenth century, and antagonistic official policies, as well as continuous onslaughts of epidemic diseases, Native American populations began to dwindle. While the Comanche and a few other groups were able to maintain some social cohesion, other groups were eliminated or lost their individual identities as the survivors merged with isolated survivors from other bands. Remnants of bands from the Plains and from across the continent, including Kickapoo, Seminole, and others, ranged across the state seeking refuge from annihilation.

The initial settlement of the San Antonio area was undertaken around 1718 with the founding of the San Antonio de Valero mission (today's Alamo) along the east bank of the San Antonio River and the Presidio de Bexar and the nearby civil settlement of the Villa de Bexar on the opposite bank. The first attempts at building canals to transport water from the San Antonio River to the fledgling settlements were undertaken at this time. Cox (1999:319) indicates that the Alamo Acequia was begun shortly after 1719, while Noonan (1987:18) suggests that it was begun as late as 1724. Cox (1999:319) notes that Fray Miguel Sevillano de Paredes, who visited San Antonio de Valero, reported that the Alamo Acequia, which brought water to the mission as well as to its agricultural fields, was still under construction as late as 1727. When first built, this acequia was approximately 3.5 miles in length; additional channels and laterals to farm lands extended the system to nearly 10 miles (Cox 1999:319).

In the 1730s, the troubled East Texas missions originally founded in the late seventeenth century to protect Spain's claim to its frontier with French Louisiana, were relocated to San Antonio where they were strung along the banks of the San Antonio River south of the Alamo. Along with the Alamo, Concepcion, San Jose, San Juan Capistrano, and San Francisco de Espada became the backbone of settlement in the area and one of the most important sites of missionization of the native American inhabitants on the eighteenth-century Texas frontier.

## **PREVIOUS ARCHAEOLOGICAL RESEARCH**

Bexar County has a rich archaeological heritage and considerable research has been undertaken there. Overall, more than 1500 sites have been recorded in the county. As one of the oldest towns in the state, San Antonio has a wide range of well preserved historic sites from the Spanish Colonial period to the recent past and numerous investigations have been carried out at these sites. Among the most important of these are the various archaeological projects that have been undertaken at the missions through the years; many of these have focused on San Antonio de Valero, the Alamo, the earliest and most famous of the Spanish missions (Sorrow 1972; Fox et al. 1976; Fox 1992). In addition to investigations at the Alamo, extensive historic investigations were conducted just to the southeast of the current project area in association with the construction of the Alamodome (Fox et al. 1997a, 1997b, 1997c).

Lying along the Balcones Escarpment with its many springs and a wide variety of faunal and floral resources, the county witnessed a long history of intensive exploitation by Native Americans dating back to the earliest times and many important excavations of prehistoric sites have been undertaken in the San Antonio area. Archaeological investigations have been carried out at a number of significant sites in this area, including the Walker Ranch site (Fox 1979; Hudson et al. 1974; Scurlock 1973), the Panther Springs site (Black and McGraw 1985), the Granberg site (Schuetz 1966), the St. Mary's Hall site (Hester 1978a, 1978b), the Pavo Real Site (Collins et al. 2003), the Culebra Creek Site (Nickels et al. 1998), and at various sites

along the proposed Wurzbach Parkway (Black 1998; Black et al. 1993; Potter and Black 1995; Potter et al. 1995). There have also been a series of important investigations at various historic and prehistoric sites at Camp Bullis (Boyd et al. 1990; Cestaro et al. 2000; Cestaro et al. 2001; Katz 1987; Kibler and Scott 2000; Maslyk and Kibler 1998; Scott 1999). Several investigations have also been conducted in Government Canyon State Natural Area (Greaves et al. 2002; McNatt et al. 2002)

## METHODS OF INVESTIGATION

Prior to the field work, the THC and the Texas Historic Sites Atlas online were consulted for previous projects and previously recorded sites within and in vicinity of the project area. In addition, map and bibliographic resources were consulted at the Texana Collection of the San Antonio Public Library.

Survey of the Ingram Hills Park was accomplished according to standard methods adapted to the particular circumstances of the park area and its layout. A 100% pedestrian survey was conducted of the entire proposed facility area. This walkover showed that the channelization of the creek had completely altered the original topography of the alluvial valley, leaving dredge spoil atop the banks for some distance from the original creek. Based on the examination of the bases of extant trees, this fill was judged to be two meters and perhaps more throughout a sizeable portion of the park. Because of the depth and the gravelly nature of the fill on the park site, shovel testing was not considered practical.

Historic maps and aerial photographs of the area indicate that Horseshoe Bend once extended east-west through the park area. It is not clear when the street may have been vacated but historic research at the San Antonio Public Library indicates that Horseshoe Bend was built around 1955-56 when it first appears in the city directory (Worley Directory Company 1955-56). By 1957 nine residences had been built along the street although it is not clear if any were ever built within the project area (Worley Directory Company 1957). By 1958 Majestic Drive, the street that now bounds the east edge of the park, was built although the city directory specifically indicates that no houses were present (Polk and Co. 1958). By the following year several houses were constructed. A long rectangular building is shown as a photorevised addition to the 1973 USGS map, indicating that it had been built since the original 1967 publication date (no buildings were shown in 1967). By the time of the 1993 edition of the map, a differently configured square building is shown in approximately the same area. It is impossible to determine if these two images represent different stages in the history of the same building or two distinct structures. In any case, neither pre-dates the 1967 map and neither one stands in this area today. In fact, no structures stand today along the east side of the creek anywhere in this general area. Some decaying sheet rock and other construction materials were observed mixed in the fill on the surface of the park at the extreme southern end. This is the only area where such debris was observed and may reflect the demolition of the mapped structure prior to the ca. 1995 channelization. Note that neither building is visible on the 1995 aerial (Figure 4). Given the dates for the initial construction of the neighborhood in the mid 1950s, it is not thought that any buildings that may have been located in this area would be eligible for the National Register since they could not be more than 50 years old. Earlier maps of the area show no constructions of any kind or any roads in this area.

Because of the depth of artificial fill in the park area, backhoe trenching was chosen as the only practical means to located cultural resources and to assess the potential for such resources. A total of six trenches were located in the park. Four of these were placed in the southern portion of the park where the impacts from planned development were considered greatest. Because of the continued presence of utilities within the old Horseshoe Bend right-of-way, no trenches were located in this area. Two trenches were also located north of the right-of-way.

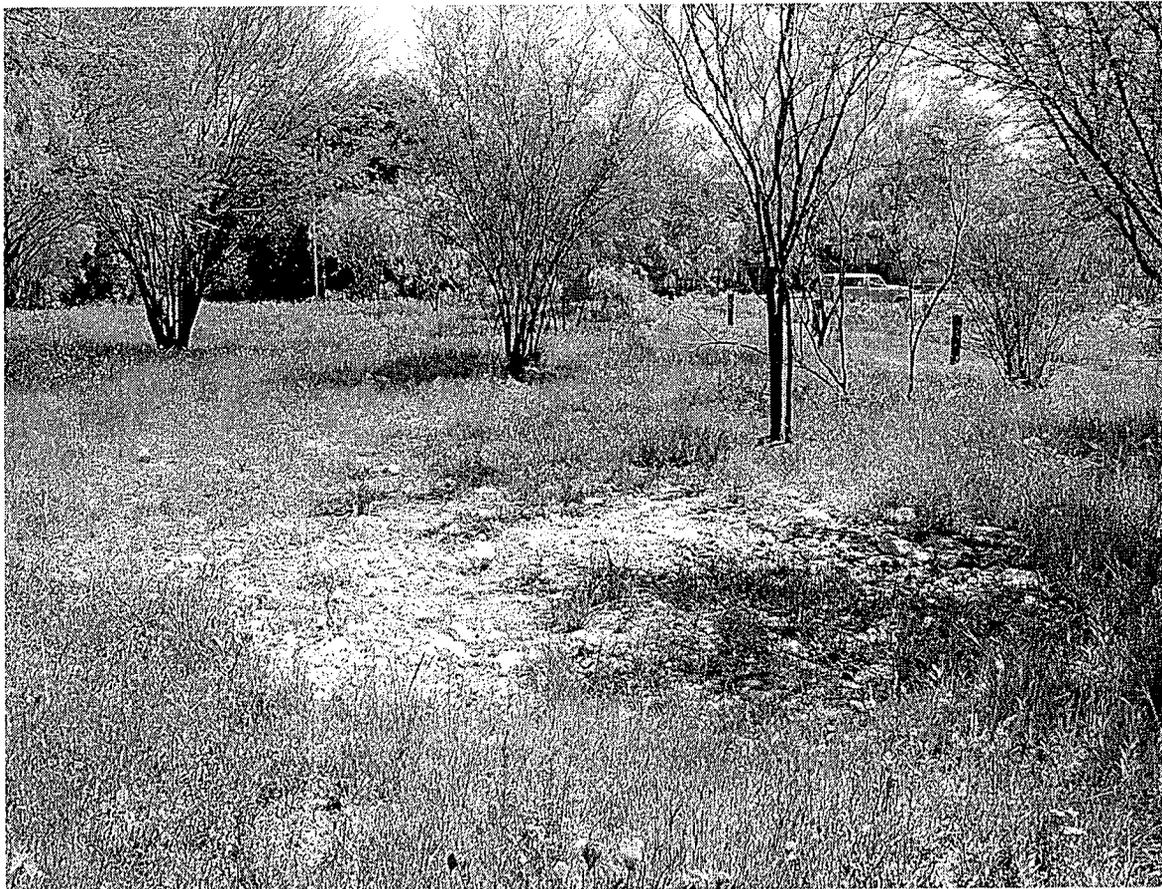
Trenches were excavated to depths ranging from 180 to 270 centimeters. Excavation of all six trenches was monitored by one or both archaeologists. All were excavated in approximate 20-centimeter layers with each bucket load examined for sign of artifacts, and the trench itself scrutinized for artifacts, features, or paleosols that might indicate previous stable surfaces. In particular, the trenching was informative about the nature and depth of fill that covered the entire park area. The results of this trenching are described in the next section of this report.

No cultural resource sites were recorded in the survey and no cultural materials were collected for curation.

## SURVEY RESULTS

Walkover survey of the park area revealed only two possible tested chert cobbles on the surface in highly disturbed and deeply filled areas. These few specimens could not be identified as being of cultural origin; they were quite possibly caused by machine dredging of the channel area and dumping of the gravelly spoil on the bank. These cobbles were clearly not in place and examination of a large number of cobbles in the gravelly fill of the park area did not reveal any other potential cultural materials.

Instead, the survey provided ample evidence that the original land surface of the park had been raised during channelization of the adjacent Zarzamora Creek and its unnamed tributary. Approaching the park from the street, there is a 50-centimeter to one-meter high scarp rising above street level on the south side of the park that in part indicates the depth of fill in this area. And at various places within the park, depressions around the original surfaces of some trees indicate that the fill is up to two meters deep in places. Observations of partly buried tree trunks around the park suggest that this fill is deeper towards the south gradually rising to the surface at the north end near the bridge where an ancient cedar elm clearly stands with little or no fill at its base. Finally, the surface of the park is bare rock in places (Figure 5), including some area where intentional rubble or concrete fill has been added to the dredged natural gravel fill from the creek.



*Figure 5. Dredge spoil visible on ground surface and typical vegetation of south half of park area.*

A series of six backhoe trenches were excavated to examine the depths of fill across the park and to assess the possibility of cultural materials buried below this relatively recent, artificial fill. Figure 6 shows the

location of these trenches. All of the trenches encountered artificial fill to various depths. Because of safety concerns with the depth of the fill and its poorly compacted gravelly structure, the deeper areas of the trenches could not be examined in great detail. Nonetheless, all were examined and are briefly described here. No cultural remains were noted and, given the natural underlying soils, such remains are not likely to be found in this area.

Trench 1 was excavated at the south end of the proposed pavilion area in the extreme southeast corner of the park. It was located about 7.5 meters west of the cable fence that marks the current boundary of the park. Oriented at 82 degrees, it was about 5 meters long and 80 centimeters wide. Maximum depth was 245 centimeters. Surface elevation in this general area, according to the Parks and Recreation Department existing site plan, is about 784 feet above mean sea level. Recent fill extended to a depth of 180 centimeters, below which was a dense black (10YR2/1) clay with little or no gravel and moderate, fine to medium subangular blocky structure. No pedogenic variation was noted in the upper 65 centimeters of this original soil which shows some similarities to the Houston Black gravelly clay that is mapped by the Soil Conservation Service in this area. In fact, this soil is essentially identical to the related Houston Black clay soils that lack the gravelly solums of their taxonomic cousins. The upper surface of the clayey original soil was flat and showed no evidence of truncation or alteration. While no grass roots or other surface root mat was visible, a number of larger roots were present in the upper 10 centimeters of this stratigraphic unit. These roots ranged from 5 to 10 centimeters in diameter and were probably from one or more nearby mesquite trees given the color and texture of the roots. The roots themselves were soft and partly deteriorated suggesting that the trees that they once supported were removed many years ago. Note that this clayey original soil also shows no evidence of having been plowed or any other alteration in surface structure.

The overlying fill of Trench 1 was broadly layered suggesting that the dredging and placement of fill was a single, short-term event rather than the accumulation of fill from different sources on the tract over a long period of time. Four separate layers of fill were noted in this trench. At the top was a 20-centimeter thick fill unit dominated by black clayey soil and the modern grass root structure. A few gravels were noted in this layer. Below this was a layer of gravelly fill with a tan to beige clay that extended down to a depth of 70 centimeters. Gravels, which mostly ranged from 3 to 8 centimeters in diameter, comprised 50 percent or more of the mass of the stratum by volume. The third fill layer was a gravelly stratum with a whitish or pale brown caliche fine component that extended downward to 110 centimeters. Gravel may have been a somewhat greater percentage of the total volume and perhaps exhibited a slightly more variable size range, but in general the second and third layers were relatively similar except for the color and texture of the finer fill. The lowest fill unit, extending from 110 centimeters to the top of the original natural soil at 180 centimeters, was also largely a gravelly fill mixed with areas of black and yellow clay. These clayey areas were not so well mixed into the gravel fill as in the upper layers and the black clay matrix in particular looked as if it had been ripped up from the original surface and poorly mixed with the dredged fill. Despite this, the underlying original soil layers showed no clear evidence of having been truncated or excavated out either in this trench or in any of the other trenches where it was present.

No cultural materials of any kind were observed in the fill or the original soil removed from the trench nor were any cultural materials observed in a careful examination and partial troweling of the intact trench profiles. Much of the gravelly fill appears to have come directly or indirectly from channel gravel deposits associated with Zarzamora Creek. This coarse gravelly sediment may have been utilized as a source for raw materials by prehistoric peoples who traversed the area, but the channel bottom or lower point bar environment under which it was deposited would generally not have been a suitable locale for prehistoric settlement. The fine-grained original soil is apparently alluvial in origin and would have represented a more favorable environment of settlement though no such evidence was observed. In many other parts of central Texas, Houston Black Clays seem to represent very old depositional environments and very rarely yield buried cultural materials.

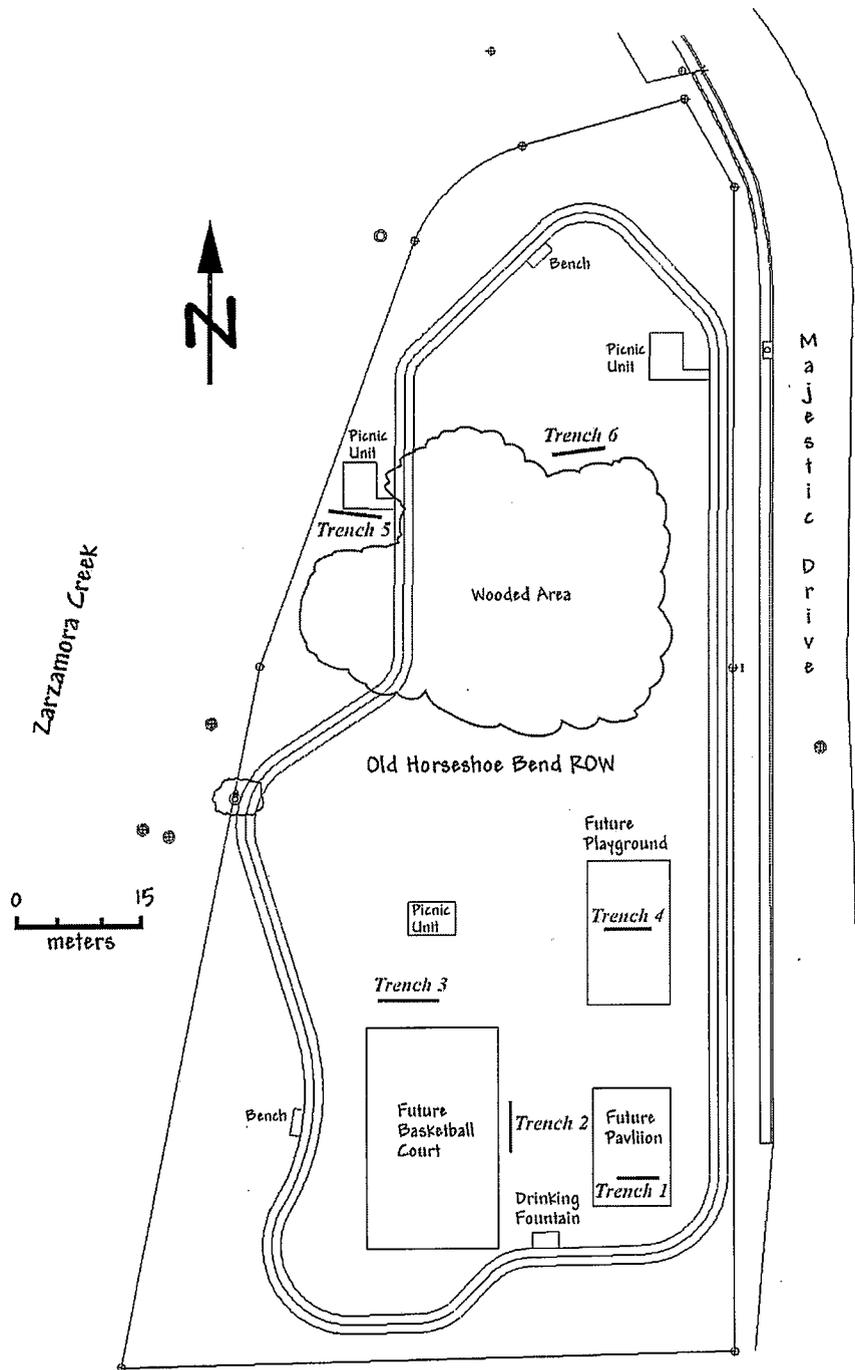


Figure 6. Ingram Hills Park area showing proposed improvements and backhoe trenches.



Figure 7. Deep fill in west profile of Trench 2.

Trench 2 was excavated roughly north-south (354 degrees) along the east end of the proposed basketball court where a pole light will be located. It was about 5 meters long, 80 centimeters wide, and 270 centimeters at its deepest point. Like Trench 1 to the southeast, the elevation of the surface in this area was about 784 feet above sea level. The trench contained fill to a depth of 185 centimeters, overlying the black clay original soil. This black clay soil was essentially identical to that observed in Trench 1, with no evidence for truncation or surface disturbance by plowing, but with no larger tree roots present as had been the case in Trench 1.

Overlying the natural black clay soil of Trench 2 were five distinct fill layers (Figure 7). The uppermost of these was 10 centimeters of surface soil with grass roots and a small quantity of gravel, probably mixed in from other layers. Below this was a 60-centimeter thick layer of tan caliche and gravel underlain by 20 centimeters of gravel in a black soil matrix. From 90 to 140 centimeters depth there was a second caliche fill, not unlike the second layer above, but with a finer somewhat more uniform clayey matrix and slightly smaller gravel. Below this, the last fill layer, extending from 140 to 185 centimeters, was a black clayey fill mixed with some gravel and lenses of apparent charcoal, perhaps from surface vegetation burning. Overall, although the layering of the fill is not the same in Trenches 1 and 2, the high gravel content and the tendency to lighter colored soil matrices suggest that the source of the fill, probably the former channel and banks of Zarzamora Creek, remained the same. Likewise, the broad similarities within fill layers across each trench and even, to some degree, between trenches supports the suggestion made above that the fill was largely excavated and redeposited in one contemporaneous event rather than representing fill added to the area over a long period of time. As in most of the trenches, the fill was very clean and little or no modern trash was observed, also suggesting a single source for the fill and relatively rapid placement.

Trench 3 was excavated near the northwest corner of the proposed basketball court. This east-west (87 degrees) oriented trench was 5 meters long, 80 centimeters wide and 230 centimeters at its deepest point. Surface elevation in this general area was mapped at about 783 feet above sea level. As in Trenches 1 and 2, fill depth was relatively consistent at 180 centimeters.

As in those other trenches, the natural soil was a black clayey soil with few gravels and no evidence of truncation or prior surface alteration such as plowing.

Four distinct layers of fill were observed atop the natural soil surface. The uppermost was 20 centimeters of white caliche gravel overlying a brown clay and gravel mixture that extended to 60 centimeters depth. Below this, extending to a depth of 110 centimeters was a layer of white caliche and gravel. The lowest layer of fill was a yellowish brown clay with gravel. No cultural materials were observed in either the fill or the underlying natural soil layer.

Trench 4 was excavated in the east central portion of the park, bisecting the proposed playground area. This east-west (85 degrees) trench was 7 meters long, 80 centimeters wide, and 180 centimeters at its deepest point. The Trench 4 area was mapped as 783 feet above sea level. At 105 centimeters to the original soil surface, fill depth was shallower here than in the first three trenches. The shallower fill layers were less complex than in other trenches. No surface soil was present here; caliche gravel was present at the surface extending downward to an approximate depth of 70 centimeters. Below a somewhat transitional wavy boundary (unlike the abrupt flat fill layer boundaries seen elsewhere in the park) was a second layer of fill, caliche gravel mixed with brown and black clay. The latter apparently mixed soil from the original site surface into the fill although the original surface was neither disturbed nor truncated in this trench (nor was this surface disturbed in any other project trenches despite the almost universal admixture of black clay from surface soils in the lowest fill levels).

Because of the higher original soil surface in this trench, it was possible to inspect this stratum more carefully than in other trenches in this area where the surface was consistently buried under about 180 centimeters of fill. In the Trench 4 case, the surface appears to have been covered with little disturbance. The intact black clayey A horizon shows no evidence of having been plowed and no gravels were observed anywhere in the exposure. The entire profile was examined and portions of it were troweled, but no cultural materials or other indicators of a possible buried land surface were found below the fill level.

Trench 5 was located at the northwest corner of the park, just inside the dirt road the followed the edge of the channelized drainage bank and at the west edge of a small wooded area. Oriented just north of west (280 degrees), the trench was 4 meters long, 80 centimeters wide, and 270 centimeters at its deepest point. Surface elevation in this area was mapped as about 780 feet above sea level. In this trench, the original surface was apparently located at about 30 centimeters depth, covered by a white caliche gravel fill. Underlying the caliche fill was dense black clay with occasional gravels that extended down to a depth of 60 centimeters where the layer becomes predominantly gravel within a black clay matrix. This gravelly black clay continued downward, with slight differences in gravel percentages, to 140 centimeters depth where the soil changed to a gray clay with gravels. Although the color change was clear, there is some slight gradation and it does not necessarily represent an unconformity. At a depth of 210 centimeters, the gravel increased dramatically, shifting to gravel within a gray clay matrix. This layer was found overlying a fine tan clay at about 250 centimeters. Although too deep to examine closely, it appears that this latter transition marks an unconformity in the trench profile.

At a depth of about 60 centimeters, just above the uppermost natural gravel layer, a badly deteriorated bone was observed in the profile. Although the bone could not be identified, it was not human and appeared to be from a small mammal. No other bone remains were noted other than this single bone and no cultural remains were observed anywhere in this trench. It is possible that the bone represents the remains of an animal that died during a flood and its bones were deposited in this general area. Since the bones were not fossilized, it would suggest that the original soil deposition in this area was Holocene.

Trench 6 was located at the northeastern edge of the wooded area that currently occupies much of the north half of the park (Figure 8). Oriented just north of east (74 degrees), the trench was 4 meters long, 80

centimeters wide, and 190 centimeters at its deepest point. Surface elevation in this general area was mapped as about 781 feet above sea level. About twenty centimeters of gravelly fill in a gray clay matrix overlay the original soil surface. This soil was a dense black clay with occasional gravels and a distinct gravel lens at about 60 centimeters depth. This gravel lens roughly matched the depth of the onset of denser gravels in Trench 5 (the denser gravel layer in Trench 5 was about 30 centimeters below the original surface while the lens in this trench lay at about 40 centimeters below the original surface). This correspondence supports the suggestion that these profiles represent intact soils.



*Figure 8. Excavating Backhoe Trench 6.*

At 160 centimeters, the black clay solum overlay a tan clay caliche mixture with gravels. The black clayey upper soil is a natural exposure of an undisturbed soil profile that exhibited little pedogenic alteration or evidence of horizonation although the presence of the gravel lens at 60 centimeters depth indicated that the soil was alluvially deposited. No cultural materials were observed in the profile.

Examination of the fill and soil profiles of the various trenches suggests that the original surface at the north end of the park may have been slightly higher than the areas to the south where large quantities of fill were placed. The modern surface elevation of the two northernmost trenches was 50 centimeters to a meter lower than the surfaces of the four southern trenches. The fill depth in these latter trenches was 150 to 160 centimeters deeper, however, suggesting that the original surface at the south end may have been as much as a meter lower. Although this differential seems relatively large for the size of the creek, observed

land surfaces across Majestic Drive from the south end of the park appear to support this lower elevation as the original surface in that area.

At the same time, the presence of apparently intact alluvial gravels in the higher portions of the two trenches at the northern edge of the park complicates somewhat the interpretation of the finer sediments at lower elevations in the south. If the observed stratigraphic differences were not in fact created by artificial land modification processes (and the preliminary evidence suggests that these are natural sequences), then the northern area must have preserved a remnant of an ancient channel that descended off of the Cretaceous uplands to the northeast of the project area. The presence of an apparent remnant of Pecan Gap Chalk underlying part of this northern area (see Figure 3) supports this. This in turn suggests that the sediments below the uppermost gravel layers in Trenches 5 and 6 could be considerably older than the finer, nearly gravel-free clayey sediments in the southern trenches. With the destruction of the original stream configuration during channelization, it is impossible to establish the depositional relationship between these two soils or to estimate the dates of deposition. Given the size and location of this relatively small alluvial system, it is possible if not probable that the deposition has neither been rapid nor recent, but it is impossible to be more specific. In both cases, however, the soils are formed from redeposited sediments rather than developed in situ from the underlying chalks and marls.

While some occurrences of the Houston Black soils suggest a date of formation or deposition that is probably too early to find human cultural material buried at any significant depth, it is impossible to make such a statement within the Ingram Hills Park area. Nonetheless, despite the potential for human settlement that is afforded by the confluence of two small drainages, no evidence was found for buried cultural materials anywhere in the park. The gravelly sediments in the northern portion of the park do not indicate an environment of deposition favorable to a campsite or more permanent settlement of any type and the age of this deposit could well place deposition in this area prior to human settlement. The use of gravels from these deposits by prehistoric peoples is likely but the few dubious examples of broken cobbles from the surface were found atop areas of massive fill and are probably attributable to machine breakage rather than cultural use. The finer clay soils of the south end of the park have greater potential for the discovery of buried human settlements, but no cultural materials were observed in the trenches located in this area. In any case, buried by massive amounts of fill, the impacts to intact portions of this southern area will be negligible.

## CONCLUSIONS

Archaeological survey of the Ingram Hills Park in northwest San Antonio was accomplished through surface walkover and the excavation of six backhoe trenches. Walkover survey and backhoe trenching failed to locate any intact historic or prehistoric cultural materials and no cultural resource sites were recorded. For the most part it is thought that the Houston Black soils that underlie the deep fill across the park are unlikely to yield buried cultural resources although soil development here may be younger than typically seen in the Houston Black series soils. In any case, construction impacts are generally shallow and will not reach below the fill in most places. The trail sections will only extend downward about 5 to 8 inches, while the future playground, pavilion, and basketball court areas will be only slightly deeper. The drinking fountain, which will have a 6-foot deep gravel drain area, will only barely reach the base of the 6-foot deep fill in that area. Two to three light poles in the court and playground areas that will have bases that reach 8 to 9 feet will be the only impact at that depth. No deep impacts are planned for the areas with shallower fill at the north end of the park. Given the lack of cultural resources and the paucity of impacts within original soils at the park, it is recommended that the City of San Antonio Parks and Recreation Department be allowed to continue with present and future development plans for the facility.

As with any archaeological survey, especially ones that sample deep alluvial areas, the discovery of unexpected and unrecorded cultural resources materials is always possible. Should cultural materials be encountered during excavation in the natural soil levels of the park, the Texas Historical Commission should be contacted immediately.

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