Cultural Resources Survey and Preliminary Archeological Testing for the City of Boerne’s Civic Campus Project, Kendall County, Texas

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Texas Antiquities Permit 5256

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Abstract

During the interval from late April, 2009, to early March, 2010, South Texas Archeological Research Services, LLC, performed a cultural resources survey for the 15.493-acre City of Boerne Civic Campus project area, Kendall County, Texas. Since the area was publicly owned, the Antiquities Code of Texas applied to the project, and Texas Antiquities Permit 5256 was obtained from the Texas Historical Commission for the survey. Fieldwork was conducted according to the Commission’s Archeological Survey Standards for Texas: Minimum Survey Standards.

An internet search of the Commission’s Texas Archeological Sites Atlas conducted prior to fieldwork revealed that the project area was not previously investigated and that archeological resources were not recorded for the area. Preliminary background research conducted by the City of Boerne indicated that several structural remnants and associated artifacts that originated during the late nineteenth or early twentieth centuries could be present within the area. A segment of an unnamed tributary of Cibolo Creek extended through part of the area as well, increasing the odds that the area might contain archeological resources of prehistoric origins.

Intensive archival and historical background research, a conventional 100-percent pedestrian visual inspection of the ground surface, and survey-level subsurface testing were performed. One archeological site, 41KE____, was found that had a historic component and also apparently had a prehistoric component. The historic component consisted of a broad, thin scatter of small artifacts at the surface, and the remnants of 12 discrete structural features and associated artifacts. What was believed to be a prehistoric component consisted of a modest surface scatter of chipped chert artifacts that were not temporally diagnostic in a strict sense. None of the chert artifacts was collected, and all were left where found at the surface, but representatives of them were mapped and photographed during fieldwork.

The chert artifacts seen were apparently all of prehistoric origins. All were found in secondary contexts. Two apparent arrowpoint performs found might have been made during the Late Prehistoric period. The Principal Investigator believed that none of the chert artifacts or the component of 41KE____ that they represented was eligible for landmarking or warranted further research or preservation.

A sample of several hundred Historic-period artifacts was collected, cleaned, and inventoried, and an attempt was made to estimate their ages and places of origins. Only a few evinced any specific diagnostic attributes, and all of them were estimated to have originated between about 1890 and 1950. With the Commission’s concurrence, after analysis all but two of them were discarded according to Chapter 26 Rules of Practice and Procedure for the Antiquities Code of Texas, 26.27 (f)(2)(B), and the two not discarded were transferred to the City of Boerne for retention in trust and formal curation at a future time.

The Principal Investigator believed that six of the 12 discrete structural features found were probably associated with the St. Mary’s Sanitarium and/or the Holy Angel’s Academy that apparently were built and used during the late nineteenth and early twentieth centuries, and that those six features, or at least substantial portions of them were fairly well preserved. Archival data examined indicated that the sanitarium and academy probably had a substantial impact on the growth and prosperity of the town of Boerne, and that one of the principal founders of the sanitarium might have been Dr. Ferdinand Ludwig Herff (1820-1912), a prominent person in the history of Boerne and central Texas and in the German-Texan heritage of the nineteenth and early twentieth centuries.

Two of those six features were tested during the survey, deemed insignificant, and with the Commission’s concurrence, were demolished in 2010 by the City of Boerne. The Principal Investigator and the Commission recommended, and the city agreed that the remaining four features, including a stone-lined well remnant, a clay-tile-and-concrete-lined well or cistern remnant, and two stone foundation footings, and a substantial buffer zone around them, should be protected from disturbance until they could be archeologically investigated in the future.
Acknowledgements

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Introduction

On seven days during April, May, and November, 2009, and January, 2010, South Texas Archeological Research Services, LLC (STARS), performed fieldwork for a cultural resources survey and preliminary archeological testing for the City of Boerne Civic Campus project, Kendall County, Texas (Figure 1). The project area was about 15.493 acres. The project included construction of a new city library building with parking and landscape areas initially, and addition of several other new city buildings during future phases of work (Figure 2). Since the project area was publicly owned, the Antiquities Code of Texas applied to the project, and Texas Antiquities Permit 5256 was obtained from the Texas Historical Commission (THC) for the survey.

Figure 1. Survey Area (within bold outline) as plotted on section of Boerne, Texas, United States Geological Survey 7.5’-quadrangle topographic map. Inset shows location of Kendall County in Texas.

The area surveyed was roughly trapezoid-shaped. Its average elevation was about 436 meters above sea level. It was surrounded on the north by small business establishments and residences; on the east by the route of the Southern Pacific (formerly San Antonio and Aransas Pass) Railroad; on the south mostly by vacant property that was previously developed into a residential subdivision, but also by a few small businesses; and on the west by Main Street. Except for an incised segment of an unnamed tributary of Cibolo Creek extending roughly north-south through the eastern portion, the area was flat to gently rolling. When examined, the creek was not flowing and contained only a few small ponds of water (Figure 3). The channel averaged about 4-6 meters wide and about 1.5-2.0 meters deep, and its floor contained a large quantity of limestone cobbles and boulders.
Figure 2. 2009 Master Plan for Boerne Civic Campus improvements. Courtesy of the City of Boerne.

Figure 3. View southward along unnamed tributary of Cibolo Creek within project area. Note limestone cobbles and small boulders on channel floor. Photograph taken by STARS on April 30, 2009.
Most of about the western two-thirds of the project area, which was once developed residentially and commercially, was clear of native vegetation except for short grasses, yucca, and cactus. That portion contained a few large live oak and small juniper and mesquite trees, and several types of domestic vegetation including a lavender tree, numerous wax leaf ligustrum trees, and a sizeable patch of *Vinca minor* ground cover. Vegetation along the tributary margin within the eastern third of the area consisted of the remnant of a natural gallery forest, a dense thicket of native trees—primarily live oak, cedar elm, and juniper—and a variety of woody undergrowth.

A search of the THC’s *Texas Archeological Sites Atlas* (Atlas) prior to fieldwork revealed that apparently the project area was not surveyed archeologically before the STARS work, and that archeological resources were not previously found or recorded there. The survey included about 84 person-hours of intensive archival and historical background research in local institutional and internet sources; about 72 person-hours of conventional pedestrian visual examination of the ground surface, documentation of artifacts found on the surface, and survey-level subsurface testing at the project area; and about 250 person-hours of analysis, interpretation, and report preparation.

Background research was led by Historic Preservation Specialist Imogen R. Cooper, AICP. Other work was led by Principal Investigator Herbert G. Uecker, who was assisted during fieldwork by archeological technician and mapping specialist Albert Uecker, RPLS. This report conforms to the Council of Texas Archeologists guidelines for survey-level investigations and represents the findings and recommendations for three temporally discrete phases of work.

General Background

This section closely follows Uecker (2006a, 2006b, 2007). The subsections on Boerne, Texas, and Ferdinand Ludwig Herff are adapted from the *Handbook of Texas Online* (Texas State Historical Association 2009a, 2009b).

*Regional Natural Setting and Natural History*

At the time of the survey, the regional physiographic and geologic setting of the project area had already been described in considerable detail (cf. Abbott and Woodruff 1986; Black 1989a:5-16; Black and McGraw 1985:40-54; Mahula 1976:2-6). Briefly, the project area is located near the southern edge of the Balcones Escarpment and Fault Zone. The fault and escarpment region is also known as the Balcones Canyonlands. Intermittent faulting began in the area during the Miocene geologic epoch about 15-21 million years ago and continued until about a million years ago.

The regional geomorphology consists of a series of northeast to southwest trending fault scarps and associated erosional features. The regional drainage pattern is dendritic and major drainages in the area include the Guadalupe River to the north of the project area, Cibolo Creek, from which Boerne Lake was formed, and the Medina and San Antonio Rivers, which are west and south of the project area. Many secondary streams, such as Browns Creek, also dissect the general area.

Base or parent rocks in the canyonlands zone include several members of the Lower Cretaceous series including the Del Rio shale formation and the Buda, Edwards, and Glenrose limestones. These formations collectively range up to as much as 10,000 meters thick over much of central and south Texas. They were formed during the Cretaceous geologic period between about 120 and 65 million years ago. During the last several million years, numerous karst features have formed within the limestone formations, which also house the Edwards aquifer (cf. Veni 1988:11-26). The aquifer is a regional-scale phenomenon composed of porous beds of limestone and shale sandwiched between less permeable calcareous strata and it is virtually the sole source of potable water for much of central Texas. Soils in the canyonlands region are derivatives of the local bedrock and are typically very thin, stony, and underdeveloped in the uplands.
Ecologically, the area has been a resource-refugium zone since the middle of the Holocene geologic epoch about 7,000 years before present (B.P. [present being arbitrarily defined by culture historians as A.D. 1950]). At that time that the onset of the Altithermal climatic episode (Nance 1972) began to substantially alter the climate of the North American southwest, including Texas. The Altithermal was a period of relatively intense heating and drying that lasted, with many short breaks, until the present. As the lush tall-grass steppes and mixed-grass prairies of south and west Texas were gradually reduced to thorn scrublands and semiarid deserts, animals and humans congregated in such areas as the Rio Grande basin and the mountain forests of west Texas and northern Mexico, and also in the central Texas Hill Country. South and west of the Hill Country, riparian zones slowly evolved into isolated ribbons of resources, and many unique places along the area’s rivers and streams became centers of human population.

The project area is situated within a broad ecotonal zone that exhibits characteristics of three major natural regions (cf. Blair 1950; Riskind and Diamond 1988): (1) the Balconian Biotic Province, a subtropical, subhumid mixed woodland or parkland that is geographically congruent with much of the Texas Hill Country and is dominated by juniper-oak scrub forests; (2) the Tamaulipan Biotic Province, a subtropical to megathermal desert steppe or thorn scrubland that ranges southward from central Texas into the coastal and Rio Grande plains and well into northern Mexico that is dominated by huisache and mesquite; and (3) the Blackland Prairie, a subtropical, subhumid area characterized by mixed savannah grassland or Prairie and by post oak-blackjack oak woodlands that ranges northward and eastward to the Red River area near the Texas-Oklahoma border.

The climate of these regions during the last several millennia has been typified by short mild winters and long hot summers. Modern annual precipitation in the area averages about 700-800 mm and follows a bimodal pattern with maxima in May and September. The Balcones tablelands have sometimes been the locus of world record precipitation events triggered by tropical waves of warm moist air from the Gulf of Mexico colliding with colder dryer air of arctic and subarctic origins surging southward from the high plains (Caran and Baker 1986).

In the late 2000s, there were hundreds or even thousands of species of plants, animals, and insects thriving in central Texas. It is beyond the scope of this report to include a comprehensive listing or description of these species but the interested reader is referred to publications by Davis (1960), Enquist (1987), Everitt and Drawe (1993), Kutac and Caran (1994), Neck (1986), Riskind and Diamond (1986), Simpson (1988), and Vines (1984). Major terrestrial faunal species and avifaunal species of the area include the white-tailed deer, javalina, coyote, red fox, opossum, raccoon, ringtailed cat, squirrel, striped skunk, armadillo, wild turkey, bobwhite quail, Inca dove, white-winged dove, box tortoise, and western diamondback rattlesnake. Prominent raptors of the region include turkey and black vultures and various species of owls; and red-tailed hawks, eagles, and peregrine falcons. Also, modest numbers of cougar and bobcat are present in the less populated areas.

Prominent plant species and communities of the project area and immediate vicinity are typical of those found throughout much of central Texas. Live oak, mountain laurel, persimmon, and juniper are major tree varieties in the hill country scrub forests. Tree species such as mesquite, huisache, and blackbrush acacia; and many cacti and yuccas including prickly pear, Spanish dagger, and sotol are prevalent in the thorn shrub thickets. The stream courses and river bottoms of the area contain a broad spectrum of native deciduous trees including Spanish oak, cedar elm, hackberry, pecan, walnut, cherry, and ash. Whitebrush, giant ragweed, cockle burrs, snow-on-the-prairie, frost plant, and numerous other herbs and forbs cover the forest floors. Dozens of types of short and mid grasses carpet the area’s prairies and savannas.

Regional Culture History and Cultural Ecology

Probably attracted by the abundance of pristine water, the steep ecological gradients, and the rich biotic microenvironments present, humans first occupied the central Texas area at least 11,000 years B.P. The local culture history contains four broad divisions (cf. Black 1989b:25-33, 1989c:48-57; Black and McGraw 1985:35-40; Hester 1980:27-37; Turner and Hester 1999:50-63): the Paleoindian period (ca. 11,000-8000 B.P.), the Archaic period (ca.
8000-1500 B.P.), the Late Prehistoric period (ca. 1500 B. P. to A.D. 1528), and the Historic period (ca. A.D. 1528 to present). During all but the Historic period, humans in the area were engaged in a nomadic to semi-sedentary hunting and foraging lifeway. Archeological evidence indicates that they were organized as small groups or bands that traveled much of the time in regular patterns, known as subsistence forays, in order to exploit a variety of seasonably available natural resources. This lifeway was practiced in most of North America for many thousands of years before the fifteenth century infusion of Europeans to the New World.

Such peoples were largely of Asiatic origin, but are variously referred to as aboriginals, native Americans, American Indians, ancient Americans, or early Americans. Apparently many of these pioneers entered North America from eastern Siberia via the Bering Strait sometime prior to about 15,000 B.P. They probably came during a major episode of global cooling and glaciation when an ice sheet or bridge connected Siberia to Alaska. They eventually spread throughout the Americas, and their cultures flourished and greatly diversified, especially during the last few thousand years. By the early eighteenth century when the Spanish established missions in Texas, several hundred Indian groups, each having a fairly distinct linguistic or socio-political identity, lived in the southwestern United States, Texas, and northern Mexico (cf. Campbell 1979:1, 1988:39; Schuetz 1976:1). The story of these peoples' prehistoric past encompasses the first three major periods in the culture history of the central Texas area.

The Paleoindian period includes the terminus of the Pleistocene geologic epoch and the beginning of the Holocene. The climate of the period was generally somewhat cooler and more humid than that of later periods. The natural landscape in much of central Texas during this period consisted mostly of forest parkland, i.e., savannah grasslands with numerous clusters of trees. The lush vegetation of the period provided a trophic base which supported many large ice-age herbivores and carnivores. Sea level along the Texas coast is estimated to have been about 120 m lower than at present; thus, a broad seaward expanse of land, which is now inundated, existed during those times. Paleoindians were typically organized as small, nomadic, stone-age, hunting and foraging bands that often pursued such large game as bison, mammoth, and mastodon. The fact that they supplemented their diets with wild plant foods has been documented only occasionally in much of Texas because of the poor preservation of pollen and plant fibers in most local soils. The relatively few Paleoindian sites documented in Texas consist primarily of isolated finds of chipped stone spear points that exhibit highly distinctive styles and workmanship, and rare kill and butchering sites of Pleistocene game animals.

The Archaic period is characterized by a shift to generally dryer and warmer conditions, sometimes referred to as the Altithermal climatic period (Nance 1972). The Altithermal of Texas apparently was punctuated by alternating mesic and xeric episodes that were sometimes of significant duration and magnitude. In spite of these erratic patterns, the landscape gradually evolved into a mosaic of alternately sparse and lush savannah grasslands with isolated stands of trees on the uplands and heavier arboreal growth in the riparian zones.

This drying out of the land after the Pleistocene corresponds to broad changes in the lifeways and cultures of native peoples. The archeological record indicates that a substantial degree of diversification in human subsistence patterns occurred. Emphasis shifted from the hunting of large Pleistocene mammals, by then extinct, to a new focus on the hunting of smaller game and on plant food gathering, processing, and consumption. During most of the period the dominant lifeway continued to be nomadic hunting and foraging by small egalitarian bands who exploited scattered seasonal resources. As evinced principally by the appearance in the archeological record of large communal or clan cemeteries toward the end of the period, population growth resulted in land and other resource scarcities, prehistoric peoples began to form into large groups, and territorialism, sociopolitical complexity, and semipermanent or permanent settlements fromed.

The predominant type of central and south Texas archeological site of the period is the occupational refuse pile, or midden. Such midden sites are frequently large, open, seasonally occupied base camps located along rivers and streams. They were central places used for the accumulation, processing, cooking, and consumption of foods, and presumably for habitation as well. They were also occasionally used for burying the dead (Hester 1985). Burned
rock middens are the most common type present at interior sites. At such sites, foods were often cooked in earthen pits lined with rock slabs or boiled in hide pouches filled with water, food, and hot stones. The rocks had to be routinely replaced as they disintegrated from continual exposure to the intense heat. This resulted in the gradual accumulation of large heaps of thermally fractured and discolored rocks mixed with food scraps, discarded tools, and tool manufacturing debris. Diagnostic projectile points, radiocarbon dates, and other archeological data from burned-rock-midden sites indicate that many of them were occupied intermittently for several hundreds or even thousands of years by peoples who normally wandered about in small bands, but who gathered into much larger bands for special seasonal activities and ceremonies. Additional information about burned-rock-midden sites is provided in the section on interpretation of research findings of this report.

Other types of sites that are associated with the Archaic period include smaller, shorter-term occupancy or use sites such as upland hunting-butcheriing camps, quarry-workshop sites for the procurement of raw stone for the manufacturing of chipped stone tools, cavern or rockshelter habitation sites, isolated hearths and stone chipping scatters, burial and cemetery sites, and isolated finds or caches of projectile points or other tools.

During the Late Prehistoric period, plant domestication and other agricultural practices were gradually adopted. Due to the poor preservation of plant remains in prehistoric archeological deposits of central and south Texas, the extent to which these new subsistence activities were used is not known. The bow and arrow and ceramic technology were introduced from neighboring regions. Permanent settlements arose and trade networks for the routine exchange of goods with neighboring regions were greatly expanded. Sociopolitical relationships were elaborated and the concepts of local group identity and coherence were undoubtedly strengthened.

The impact of these changes on the lifeways of the native peoples living in central and south Texas during the period is just beginning to be known. Apparently with few exceptions, the Archaic lifeways practiced in south and south-central Texas continued largely unmodified into the Late Prehistoric period. The modifications in the technological and cultural inventory that occurred there during the Late Prehistoric period and that manifest archeologically include the production and widespread distribution of smaller, lighter stone tips for arrows and the routine production and use of ceramics. The subsurface remains of prehistoric houses or village sites, and the attendant traces of nearby activity areas, fortification features, agricultural plots, and irrigation systems from the period are present in Texas, but are confined mostly to the northern, eastern, and western margins of the state. Ethnographic accounts from European explorers who ventured into the south Texas or Texas coastal areas during the sixteenth and seventeenth centuries also mention the existence of villages of crude structures, but at this writing there was virtually no known archeological evidence for the existence of such structures (cf. Johnson 1997).

Many of the indigenous Texas Indian groups, including such long term residents of the central Texas region as the Coahuiltecs and Tonkawas, continued to engage primarily in nomadic hunting and foraging well into historic times. This was the case in spite of the fact that some of their Late Prehistoric ancestors had begun the routine practice of horticulture or agriculture, and had apparently settled in permanent or nearly permanent villages by about A.D. 500. Archeological evidence has recently emerged that indicates that small permanent or semi-permanent villages were probably present in what is now central Texas as early as the Middle Archaic period (Johnson 1997). Shortly after the accidental introduction of horses into American Indian culture in the sixteenth century by the Spanish, bison-hunting became the way of life for many tribes on the Great Plains, where nomadism also continued. The Apaches and Comanches are the main southern plains tribes that invaded the central Texas area from the west and north during the 1600s and 1700s, displacing, absorbing, or exterminating many of the original inhabitants of the area (cf. Hester 1980; Newcomb 1961; Sjoberg 1953). They also frequently raided European-American settlements in or near the Texas Hill Country. During the eighteenth century, most of the surviving indigenous groups apparently fled to outlying regions or sought protection from invaders in the Spanish missions.
The Historic period in Texas began in the early sixteenth century (ca. 1528-1536). The first Spaniard, if not the first European, to set foot on Texas soil was probably Álvár Núñez Cabeza de Vaca. He was sailing the Caribbean with an exploratory Spanish expedition and was shipwrecked off the Florida coast in 1528. For about the next eight years, he allegedly wandered along the gulf coast, well into Texas, and finally arrived in Mexico in 1536. By that time, the Spanish had conquered and dominated many of the aboriginal cultures that occupied Mexico, Central America, and a sizeable portion of South America, and thus established a foothold of European-style civilization in those areas. During the period from roughly the second decade of the sixteenth century to the terminal seventeenth century, the Spanish colonized all of what is now Mexico to the Rio Grande. In 1691, an expedition of Spaniards from Mexico penetrated Texas to San Pedro Springs, now located in the northern portion of San Antonio's central business district. In an often-quoted report to the viceroy, explorer Domingo Terán de los Ríos describes the territory:

We marched five leagues over a fine country with broad plains---the most beautiful in New Spain. We camped on the banks of an arroyo, adorned by a great number of trees, cedars, willows, cypresses, osiers, oaks and many other kinds. This I called San Antonio de Padua, because we reached it on his day [Terán de los Ríos 1691 as quoted in Crook 1967:1-2].

Fray Damian Massanet, also with the 1691 Spanish expedition, is cited by Crook as attesting that they encountered a very large tribe of Payaya Indians at that same location.

Several more preliminary expeditions into Texas were conducted by the Spanish during the next few decades. The landing of the Frenchman René Robert Cavelier, Sieur de La Salle, on Matagorda Island in 1684 and the subsequent activities of the French in Texas appear to have consolidated the resolve of the Spanish to colonize the region north of the Rio Grande. Some Spanish families had permanently settled in the vicinity of San Antonio by 1715 (Chabot 1936:8), and by 1718 the Spanish officially established the first settlement north of the Rio Grande near San Pedro Park. Called San Antonio de Padua, it consisted of a mission and a presidio based on agriculture employing Indian labor and irrigation. This subsistence base was used by the Spanish for virtually the entire time that they controlled the area.

The Spanish soon expanded their colony southward along San Pedro Creek and the San Antonio River, and by 1726, citizens of the crown numbered about 200 in the San Antonio area. In 1731, a party of about 52 additional settlers arrived from the Canary Islands and joined the fledgling colony. The Bexar County missions south of the present Alamo were imported during the mid eighteenth century from what were originally satellite locations in east Texas, and the relocation constituted a final impetus for Spanish settlement in the vicinity.

The missions continued active throughout much of the remainder of the eighteenth century. With the beginning of secularization of the missions in the early 1790s came the granting of what had previously been the mission-controlled lands in Texas to Spanish citizens. By the end of the mission era, the indigenous Indians who were, presumably, descendants of the first human inhabitants of south and central Texas, had been virtually eradicated. Many of those who took refuge in the missions died of European-introduced diseases, and the hunting-gathering lifeways of the remnant populations radically disrupted by mission life and the trials of acculturation.

For many decades after the missions waned, the culture history of much of Texas continued to be dominated by their influences. Throughout the periods of Mexican and Texan independence, the U. S.-Mexican War, and until just prior to the Civil War, the subsistence base of the region was largely agricultural and local population growth was fairly benign. There were very few changes in land usage in the area throughout the reigns of several major imperial powers over almost a century and a half until the railroad and the Industrial Revolution came to the region (Fehrenbach 1978:114-117).
Due principally to the infusion of German culture into Texas, substantial changes in local land usage began to occur during the second quarter of the nineteenth century, and their affects lasted through virtually the remainder of the century. It is clear from the history of immigration in Texas that there were simultaneous appearances of significant numbers of several other ethnic groups, mostly of northern European origins, but German immigrants were remarkably talented and unusually tenacious settlers, organizers, builders, and commercializers in the Central Texas area. The Germans came early, quickly planted deep roots, and spurred much later development.

As early as the 1830s, a few Germans had already migrated to Texas (Lich 1986:6). Substantial German colonization in Texas began in about 1845 with Prince Carl of Solms-Braunfel's founding of New Braunfels (Biese 1930:119). During the next decade, the German settlements of Fredericksburg and Boerne developed in the Hill Country north of San Antonio. Contemporaneously, the Germanic population of San Antonio was on the increase and by 1876, according to the town assessor, totaled 5,630 Germans and Alsatians (Fehrenbach 1978:117).

The Germans settled principally along the Balcones Escarpment in central Texas. The escarpment is the most prominent landform in the Central Texas region and has served as a transitional zone between broadly different lifeways throughout most of the Historic period: “Since earliest European settlement, the Balcones Escarpment stood as a cultural frontier, a dividing line between the farming economy of the coastal plain and the ranching economy of the Texas Hill Country. The Escarpment has greatly influenced the cultural development in the land which it transects [Palmer 1986:153].” Since about the beginning of the nineteenth century, and especially prior to the Civil War, the Escarpment has been the physical and cultural boundary between the Old South and the Old West. Before the coming of the Industrial Revolution to the area during the late-nineteenth century, the economy of the Old South was based primarily on the growing of cotton, while that of the Old West was based mainly on livestock production (Abbott and Woodruff 1986:Preface).

The Cibolo Creek Corridor

The Cibolo Creek corridor, which includes the project area, is about 125 miles long and passes through six Texas counties: Bexar, Comal, Guadalupe, Karnes, Kendall, and Wilson. The culture history of the corridor is lengthy and colorful and the entire drainage system can be characterized as a unique historic landscape. Cibolo Creek was called Xoloton by the Coahuiltecan Indian groups of south Texas and northern Mexico and Bata Coniquyoqui by the central Texas Tonkawan Indians of the early historic era. Apparently the meaning of these names has been lost. By 1721, it was known to the Spanish as Arroyo del Cibolo or Rio Cibolo, which mean Buffalo Draw and Buffalo River, respectively. This name apparently originated after the Spanish observed Indians driving buffalo over the steep bluffs lining the upper reaches of the creek.

At the Cibolo Creek archaeological site near Sutherland Springs in Wilson County, literally hundreds of chipped stone projectile points, commonly called “arrowheads”, scrapers, and other stone tools of the earliest prehistoric peoples of the Americas have recently been discovered in a sand mining pit. The full extent of the site has not yet been determined, but its artifacts have been found scattered over at least 200 acres. Another very ancient site along the corridor was discovered during the late 1960s in a sinkhole on the Hitzfelter Ranch in Comal County, just east of Kendall County. Although the exact age of the site is not known, chipped stone tools and the burials of prehistoric peoples were found there with the skeletal remains of ice-age saber-toothed cats and mastodons.

Other ancient sites along the corridor have been found near the Bracken Bat Cave and at the mouth of Natural Bridge Caverns in Comal County. At Natural Bridge Caverns, during occupations spanning several thousand years, prehistoric Indians repeatedly lined basin-shaped earthen pit ovens with slabs of limestone that were used as heating elements to cook meat and plant foods. As the slabs broke apart from frequent heating and cooling, they were tossed aside and replaced with fresh slabs, forming a type of site known to archaeologists as a burned rock midden. Literally thousands of such sites have been found along the rivers and major streams of central Texas, and they are especially numerous along the upper Cibolo.
A historical marker near the Church at Czestochowa, the second oldest Polish colony in Karnes County, is inscribed:

Near this site [about 2.5 miles north on Cibolo Creek] stood the 18th-century Spanish fort of El Fuerte de Santa Cruz del Cibolo, usually called El Fuerte del Cibolo or El Cibolo. Built to protect the many Spanish ranches between San Antonio and La Bahia (now Goliad), the fort was occupied first from 1734 to 1737, and again from 1771 to 1782. The land between the San Antonio River and Cibolo Creek, called “El Rincon”, was part of an area deeded by the King of Spain to missions and many private individuals. The site of El Fuerte del Cibolo was part of a private ranch called El Rancho de San Bartolo which belonged to Andres Hernandez. In 1772 the Spanish government formally authorized the establishment of fifteen presidios (forts) from California to Texas. El Fuerte del Cibolo, which had been reactivated in 1771, came under that authorization and remained an active fort until 1782. Twenty soldiers were stationed at El Fuerte del Cibolo on July 4, 1776. Some of them helped move cattle and horses from this area to the Gulf Coast, where Spanish forces under Gen. Bernardo de Galvez defeated the British during the American Revolution, thereby contributing to the winning of American independence.

In spite of the early presence of the Spanish, substantial settlement did not occur along the Cibolo Creek corridor until the influx of German Americans to the area during the 1840s and 1850s. In 1849, a small group of German colonists established one of the first communities along the upper reaches of Cibolo Creek, in what later became Kendall County. They named it Tusculum, after Cicero’s home in ancient Rome. By 1852, the name had been changed to Boerne, in honor of Ludwig Boerne, a German poet and publicist. Several other communities were founded along Cibolo Creek by German immigrants during this period including Schertz and Bulverde, which was originally called Pieper’s Settlement. Also in 1849, Dr. John Sutherland founded the community of Sutherland Springs along Cibolo Creek in Wilson County. By about 1910, the town had become world famous for its hot mineral springs, which were improved with bath houses and a fifty-two-room hotel. Visitors came there from as far away as Canada and even England.

**Boerne, Texas**

Boerne, the county seat of Kendall County, is located on Cibolo Creek, Interstate Highway 10, and U.S. Highway 87 thirty miles northwest of San Antonio in the southern part of the county. As noted in the previous subsection, the first settlers arrived in the vicinity in 1849 when a group of German colonists from Bettina camped on the north side of Cibolo Creek, about a mile west of today’s City of Boerne.

In 1852, Gustav Theissen and John James laid out the townsite and changed the name to Boerne in honor of Ludwig Boerne, a German author and publicist. A post office was established in 1856 with August Staffell as postmaster. The community had only 10 houses in 1859, but it was chosen as county seat by a margin of 67 votes after the county was established in 1862. A courthouse was built in 1870 and was still in use in the 1990s. It was thus the second-oldest courthouse in the state.

Boerne developed the reputation of having a very healthful environment and quickly became known as a health resort. By 1884 it had five hotels, assorted businesses, and 250 residents. Cotton, wool, and grain were the principal shipments, but timber, cedar posts, and building stone were also profitable commodities. The arrival of the San Antonio and Aransas Pass Railway in 1887 brought increased economic opportunity, and by 1890 the population of Boerne had risen to 800.

Boerne residents voted to incorporate in 1909 and established a mayor-alderman form of city government. Also in that year they established the Boerne Independent School District. The population was reported at 950 in 1914, and the community prospered through the 1920s. The Great Depression of the 1930s, however, all but put an
end to the tourism and cotton farming that had been staples of the local economy. The population fell from an estimated 2,000 in 1928 to 1,117 in 1931. It had risen to only 1,271 by the 1940s.

In the 1950s, however, many residents turned to nearby San Antonio for employment, and Boerne became a bedroom community. The population grew at a slow but steady rate, reaching 2,169 in 1960. In the 1960s, construction in neighboring Bexar County of the San Antonio Medical Center and the University of Texas at San Antonio, as well as the completion of Interstate Highway 10, made Boerne even more attractive as a town from which to commute. Its population rose to 2,400 by 1970, 3,254 by 1980, 4,274 by 1990, and 6,178 by 2000.

In spite of the influx of different ethnic groups, the German cultural tradition has dominated the community in many ways. The Boerne Gesangverein, or singing society, which was established in 1860, was an important social and recreational organization until it disbanded in 1977. The Boerne Turn Verein, incorporated in 1906 as a non-profit social and athletic club, was still in operation at this writing. Other German community organizations still active in 2009 included the Boerne Schuetzen Verein (shooting club), which was formed in 1864, and the Boerne Village Band, which was formed about the same time as the singing society. Boerne has also held an annual celebration, the Berges Fest, since 1967.

Ferdinand Ludwig Herff

Ferdinand Ludwig von Herff (1820-1912), physician, son of Christian von Herff and Eleanora von Meusebach, was born at Darmstadt, Germany, on November 29, 1820. He came from an aristocratic family, and his father was chief justice of the Hessian Supreme Court. While attending the University of Bonn, Herff lived with his uncle, the president of the university, and was able to meet many famous people. Studying under influential medical scientists and learning avant garde concepts and techniques, he began his medical education at Berlin and finished in 1843 at Giessen. While a surgeon in the Hessian Army (1843-47) he developed ingenious techniques in plastic surgery and tuberculosis treatment.

Because of the political environment in Germany at this time, many Germans were emigrating, especially to America. In 1847, Herff helped organize a group composed mainly of university-educated professionals, Die Vierziger (the Forty), to found an idealistic commune in Texas. The commune was named Bettina and was located on the Llano River near what is now Castell. The enthusiastic settlers were ill prepared to cope with stern frontier realities, however, and within 18 months the commune failed.

Herff returned to Germany convinced that Texas would be his ultimate home. He married Mathilde Klingelhöffer in 1849. He rejoined the military, and his successes in treating battle casualties were attributed to his dexterity and his scrupulous attention to cleanliness (prior to antisepsis), which resulted in low infection rates. He returned to Texas, became a citizen, and dropped the nobility title "von" from his name.

He and his wife settled briefly in New Braunfels, then moved in 1850 to San Antonio, where Herff began one of the most prolonged careers in Texas medicine. There was no lack of patients, but most were indigent, and Herff’s philosophy that professional satisfaction was its own reward led to family hardships. Of necessity surgery was performed in homes, hotels, and even in open-air locations.

His reputation grew as a result of remarkable medical feats, including the removal of two large bladder stones from a Texas Ranger, an operation which was Herff's first use of chloroform and was witnessed by a crowd of onlookers which included Ranger William A. A. (Big Foot) Wallace; cataract removal resulting in the restoration of eyesight; the correction of a depressed skull fracture to alleviate traumatic epilepsy; and expert arrow removal (one victim traveled over 100 miles to obtain lifesaving relief). He also performed gastrostomy on a young person who had ingested lye, and at age 84 under primitive ranch conditions he operated on his daughter-in-law, who had an ectopic pregnancy.
Herff worked tirelessly to achieve high standards of medical practice. He helped organize the Bexar County Medical Society, the West Texas Medical Association, the Texas Medical and Surgical Record, and the Texas Medical Association and served on the Texas State Board of Medical Examiners. He was also instrumental in the establishment of San Antonio's first hospital. Herff shunned encomiums, but he received many honors, including recognition from the University of Giessen and St. Louis College of Physicians and Surgeons. He died in San Antonio on May 18, 1912.

General Archeological Setting

Black (1989b:Figure 12) includes Kendall County in the Central Texas Plateau Prairie archeological area. Turner and Hester (1999:Figure 4-2) distinguish eight major archeological areas in Texas and include the county in the Central Texas area. Due to its physical setting along the margin of the Balcones Canyonlands and Gulf Coastal Plain, at the nexus of three major natural regions of Texas, and because it contains many prominent perennial drainages, Kendall County is very rich in archeological resources of both the prehistoric and historic eras. A search of the Atlas (THC 2009) conducted prior to fieldwork indicated that about 210 archeological sites were found and recorded in the Atlas for Kendall County by about May, 2009, and that among those were two designated State Archeological Landmarks. Most of the sites previously discovered and recorded in the county were prehistoric sites found fairly recently during surveys performed in conjunction with antiquities laws compliance efforts for various construction projects (cf. Uecker 2004, 2006a, 2006b, 2007).

Readers interested in additional information about the prehistoric archeological context of the Central Texas area are encouraged to consult Archeology in the Central and Southern Planning Region, Texas, A Planning Document (Mercado-Allinger et al. 1996), published by the THC; Collins (1995); and Ellis et al. (1995).

Project Area Soils and Geobore Summary

According to the Web Soil Survey, soils within the project area are Nuvalde silty clay and Oakalla silty clay loam (United States Department of Agriculture, Natural Resources Conservation Service 2009a):

Nuvalde Series

The Nuvalde series consists of very deep, well drained, moderately permeable soils that formed in limy alluvium. These soils are on nearly level to gently sloping stream terraces and alluvial fans. Slopes range from 0 to 5 percent.

TAXONOMIC CLASS: Fine-silty, mixed, superactive, thermic Typic Calciustolls

TYPICAL PEDON: Nuvalde clay loam--cropland.

Ap--0 to 6 inches; grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, sticky; many fine roots; strongly effervescent; moderately alkaline; abrupt smooth boundary. (4 to 10 inches thick)

A--6 to 13 inches; dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; hard, firm, sticky; many fine roots; few fine pores; violently effervescent; moderately alkaline; gradual smooth boundary. (6 to 16 in thick)

Bw--13 to 21 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; moderate very fine subangular blocky structure; hard, firm, sticky; few fine roots; few fine pores; very fine effervescent; moderately alkaline; gradual wavy boundary. (4 to 18 inches thick)

Bk1--21 to 32 inches; light brown (7.5YR 6/4) clay, brown (7.5YR 5/4) moist; moderate very fine subangular blocky structure; hard, firm, sticky; few fine roots; few fine pores; few fine masses; few medium concretions, few films and threads of calcium carbonate; 20 percent calcium carbonate equivalent; violently effervescent; moderately alkaline; gradual wavy boundary. (6 to 26 inches thick)
Bk2--32 to 63 inches; pink (7.5YR 7/4) silty clay loam, light brown (7.5YR 6/4) moist; weak medium subangular blocky structure; hard, friable, sticky; 30 percent pinkish white weakly and strongly cemented concretions of calcium carbonate that are 1 to 15 mm in diameter; few fine masses of calcium carbonate; 70 percent calcium carbonate equivalent; violently effervescent; moderately alkaline; diffuse wavy boundary. (6 to 40 inches thick)

BCk--63 to 84 inches; pink (7.5YR 8/4) silty clay loam, pink (7.5YR 7/4) moist; massive; hard, friable, slightly sticky; few medium weakly and strongly cemented concretions and fine soft masses of calcium carbonate; 50 percent calcium carbonate equivalent; violently effervescent; moderately alkaline [United States Department of Agriculture, Natural Resources Conservation Service 2009b].

Oakalla Series

The Oakalla series consists of very deep, well drained, moderately permeable soils that formed in alluvium. These nearly level to gently sloping soils are on flood plains. They are subject to flooding by overflow from streams for short periods after heavy rains. Slopes range from 0 to 2 percent.

TAXONOMIC CLASS: Fine-loamy, carbonatic, thermic Cumulic Haplustolls

TYPICAL PEDON: Oakalla silty clay loam--cropland.

Ap--0 to 8 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; common fine pores; few very fine weakly cemented masses of calcium carbonate; violently effervescent; moderately alkaline; about 33 percent calcium carbonate equivalent; abrupt smooth boundary. (5 to 15 inches thick)

Ak1--8 to 16 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; common fine pores; few very fine weakly cemented masses of calcium carbonate; violently effervescent; moderately alkaline; about 33 percent calcium carbonate equivalent; gradual smooth boundary. (7 to 20 inches thick)

Ak2--16 to 23 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine and fine roots; common fine pores; few very fine weakly cemented nodules of calcium carbonate; violently effervescent; moderately alkaline; about 41 percent calcium carbonate equivalent; gradual smooth boundary. (5 to 12 inches thick)

Bk1--23 to 53 inches; brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; few fine pores; few films and threads of calcium carbonate and a few weakly cemented nodules of calcium carbonate; few shell fragments; few dark streaks of A material; violently effervescent, moderately alkaline; about 50 percent calcium carbonate equivalent; gradual smooth boundary. 

Bk2--53-80 inches; yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; few very fine roots; few fine pores; about 3 percent by volume films, threads, and soft masses of calcium carbonate, mainly in the lower part; few strongly cemented nodules of calcium carbonate; moderately alkaline; violently effervescent [United States Department of Agriculture, Natural Resources Conservation Service 2009c].

These soils are comparable to those encountered during surface inspection and subsurface testing done in conjunction with the STARS survey.
In late April, 2009, Fugro Consultants, Inc., San Antonio, drilled about 18 geobores within the project area. Most were drilled to the top of bedrock or deeper. They were placed throughout approximately the central third of the project area, west of the tributary segment, and several were drilled along the tributary’s western margin. The majority encountered clays or gravelly clays from the surface to depths of about one or two feet below the surface, over weathered limestone bedrock. In a few exceptional bores near the center of the property, clays or gravelly clays extended to depths of about three to three-and-a-half feet below the surface, before bedrock was encountered.

Methods and Results

Work was done in three temporally discrete phases:

Phase I - April 30, and May 1 and 5, 2009

Background Research. Twenty-four person hours of targeted background research was conducted in several internet and institutional sources, and by a few oral interviews with City of Boerne staff and a local historian. Appendix I contains a summary of the research, results, and a bibliography of sources. A major focus of the research was discovery of information which would demonstrate fairly definitively that the project area indeed once contained the St. Mary’s Sanitarium and the Holy Angel’s Academy (Figures 4 and 5, Appendix II), as was indicated by preliminary information provided by the city staff prior. Another emphasis of the background research was procurement of information that could be helpful in finding and evaluating buried traces of buildings, structures, or objects of the Historic period during fieldwork.

Surface Inspection and Shovel Testing. A conventional pedestrian inspection of the ground surface was done on approximate 10-meter transect intervals throughout the project area. Certain areas where artifacts were found during the initial inspection were given additional scrutiny, as were the tributary profiles and banks (Figures 3 and 6).

Even though ground surface visibility averaged about 40-50 percent throughout most of the project area, in addition to the surface inspection, 12 shovel tests (Figures 7 and 8) were excavated throughout about the eastern half of the area. With the exception of Shovel Test 13, which was dug to explore the contents of a small surface depression thought to possibly indicate the presence of a well, cistern, or trash pit remnant, shovel testing was not done in the western half of the area due to the shallowness of bedrock or dense gravel layers, which were at or just below the surface there. Also, although it appeared to have been recently over-grazed by livestock, the eastern portion seemed to be generally far less disturbed by modern human activities than the western half. The eastern half also contained the tributary channel and margins thought to have the highest probability of having any decently preserved cultural deposits or features of prehistoric vintage.

Shovel tests averaged about 30 centimeters in diameter. Depths averaged about 50 centimeters and ranged between about 40 and 70 centimeters below the surface. All tests were dug to limestone bedrock or to dense gravels or large cobbles not penetrable by hand excavations. Excavated matrix was either screened through quarter-inch-mesh hardware cloth, or when screening was not feasible due to density of clay and/or soil moisture content, the matrix was troweled through and carefully examined for the presence or absence of cultural evidence. The shovel tests yielded medium to dark gray-brown (about 10YR3/1 to 10YR5/1) or reddish-brown (about 10YR5/4 to 10YR5/6) clay or clay loam topsoil with visible natural inclusions consisting only of natural limestone or chert gravels or cobbles, over limestone bedrock. With the exception of a dense layer of buried yellow bricks found in Shovel Test 13, nothing of cultural origins was found or collected in conjunction with shovel testing.

The surface inspection revealed that the project area contained one archeological site, 41KE____, which apparently had both a historic and a prehistoric component. The two components were defined only by surface evidence and partly overlapped each other. The historic component manifested partly as a scatter of small artifacts
Figure 4. Photographic images of St. Mary’s Sanitarium (top) and Holy Angel’s Academy, provided courtesy of the City of Boerne, Texas.
Figure 5. Plan images of St. Mary’s Sanitarium in 1910 (top left) and 1924 (bottom left), and of the “Catholic School”, believed to be Holy Angel’s Academy, in 1910 (top right) and 1924, as mapped by the Sanborn Map Company (1910, 1924). Copies provided courtesy of the City of Boerne, Texas.

of modest density that extended across much of the zone between about the center of the project area and the tributary channel to the east.

That portion of the project area was designated during fieldwork as Area A. It contained a nominal “pavement” of artifacts, including many small fragmentary glass, ceramic, metal, and plastic items, most of which were temporally non-diagnostic or appeared to have originated less than 50 years ago. It also contained a few temporally-diagnostic artifacts that appeared to have originated during the late nineteenth or early twentieth centuries—primarily fragments of purple glass from bottles with mould seams and white ware ceramic fragments with maker’s marks. A small sample of the latter was collected for analysis and potentially for curation if warranted.
Matching of several of the ceramic maker’s marks with those in Kowalsky and Kowalsky (1999), revealed that the ceramics were mostly ironstones manufactured and distributed during the late nineteenth and early twentieth centuries. Many types of whiteware ceramics, including such ironstones, were mass-manufactured in Europe and the United States and sold in large quantities during that time.

The historic component also manifested as the remnants of nine spatially discrete structural features (Numbers in parentheses match those shown in orange in Figure 7.): (1) a stone-lined well; (2) a concrete-and-clay-tile lined well or cistern; (3) a steel-cased well (probably originally with windmill); (4) a linear limestone footing wall segment; (5) an L-shaped limestone foundation wall segment; (6) a concrete pad or pier (apparently for support of a wood post); (7) a stone-and-concrete rubble wall or fence segment; (8) a concrete-bordered enclosure that could be the foundation remnant of a small house or outbuilding; and (9) a depression that could indicate the presence of a buried well, cistern, or trash pit. Most of those features were within about the western half of the project area, which was designated during fieldwork as Area B. The plan locations and shapes of the features, as they were exposed at the surface, were photographed and roughly mapped during fieldwork.

What was believed to be a prehistoric component of 41KE____ consisted of a modest scatter of chert flakes and chips, cores or core fragments, thick bifacial and unifacial tool fragments (apparently all scrapers or fragments of scrapers), and several types of thinned bifacial tool fragments confined primarily to Area A, which included the flat above the tributary margin zone and the broad slope leading eastward to the channel. All of the chert artifacts seen appeared to be of prehistoric origins, but none were definitively time diagnostic. Nevertheless, a representative sample of the chert artifacts was photographed, measured, and briefly documented during fieldwork (Appendix III). None of the chert artifacts were collected and all were left where originally found.

Machine Trenching or Scraping. The scope of work originally submitted to the THC with the Texas Antiquities Permit application included mechanized trenching or scraping, if feasible and warranted, but for several important reasons machine scraping or trenching was foregone during Phase I of the survey-level investigation.

It was determined during shovel testing and confirmed by geobore data that bedrock was either at the surface or within shovel testing range in most, if not all of the project area, including the tributary margin zones. The latter were inaccessible to excavation machinery due to the density of trees and brush.

Archival research and surface inspection revealed the locations of the structure and feature remnants targeted, making mechanized test excavations unnecessary for that purpose. After consideration of the archival data and careful inspection of the surface evidence found, it seemed unlikely that the buildings that apparently were once within the project area—a tuberculosis sanitarium and an orphans’ school—would have had basements. It also seemed likely that any intact artifact clusters, scatters, or deposits associated with the foundation traces seen would be buried at relatively shallow depths and thinly dispersed horizontally. Therefore it was thought that investigation by hand excavations during later phases of archeological work was probably the only feasible method of investigating such accumulations with any reasonable degree of precision and without haphazardly destroying them.
Figure 7. Top: Project area (within dotted white outline) as plotted on recent aerial photograph. Shown are historic component of archeological site 41KE___ (within dashed white line), prehistoric component of the site (within dashed yellow line), locations of STARS shovel tests (white dots with numbers), and locations of Historic-period structural features (in orange with orange numbers matching descriptions in text). Bottom: Insets 2 and 3 of top aerial overlay showing diagrammatic plans of Features 9-12 in relationship to STARS backhoe scrapes (BS), Shovel Test 13, and discrete surface artifacts (blue dots with numbers matching Table 1 and Figure 16) and surface scatter of metal debris (hatched; see also Figure 17) near Feature 12. Locations, proportions, and dimensions are approximate and based on STARS 2009 and 2010 Trimble GPS data. Site component boundaries are estimated based on surface artifact distributions. See Figure 9 for details of Inset 1.
Figure 8. Shovel Tests 1, 6, and 8 (top to bottom in left column); and 10, 11, and 12 (top to bottom in right column). See Figure 7 for shovel test locations.
**Global Positioning System Data.** During Phase I fieldwork, a Garmin Etrex Vista C hand-held Global Positioning System (GPS) receiver was used to establish rough Universal Transmercator Coordinates for each artifact, feature, or other item found and documented. Mapping and collection of GPS data were done for the sole purpose of satisfying Texas Historical Commission rough field mapping and reporting requirements. GPS coordinates obtained are accurate only to within approximately several meters of the target.

**Reporting.** Upon completion of the archival and historical background research and archeological fieldwork for Phase I, a draft report of findings was prepared by STARS and submitted to the City of Boerne and the THC for review and comment.

**Phase II - November 3 and 4, 2009**

Based on the findings of the Phase I work, STARS’ recommendations, and the city’s construction schedule, the city and the THC agreed that no additional archeological work was needed for the prehistoric component of 41KE__ or for Features 3, 6, and 7; and that additional archeological work on the remaining six features found during the Phase I work could, at the city’s option, be deferred until construction was impending near those features. Based on the city’s revised construction schedule and its needs to conduct construction-related ground disturbances in portions of the project area not previously included in the initial phase of construction, by the fall of 2009 the city decided to proceed with additional survey-level testing of Features 8 and 9. At that time the THC recommended that the possibility that the project area contained Historic-period human graves should be further investigated through additional archival and historical background research. In collaboration with STARS and the THC, the city decided that the additional archival and historical background research to be done in conjunction with the Phase II archeological work should also target several other topics.

**Additional Background Research.** Sixty person-hours of additional archival and historical background research was performed. It targeted information about the presence or absence of Historic-period human graves or cemeteries within or near the project area; further evidence that the structural remnants previously found are indeed those of the St. Mary’s Sanitarium and Holy Angels Academy, and/or are indeed associated with Dr. Ferdinand Ludwig Herff; any pre-1870s or other significant Historic-period associations of the project area; and estimation of the age and historic associations of Features 8 and 9 (concrete foundation and pit remnants).

The additional background research included, most notably, visits, interviews with staff, and examination of archival documents at the Sisters of Charity of the Incarnate Word archive in San Antonio, the Texas General Land Office online records, the Kendall County Courthouse (land title records), and the Kendall County Health Department (vital statistics: birth and death records). Briefly, the findings of that research virtually eliminated the possibility that the project area contains any Historic-period human graves or cemeteries or contains any pre-1870 archeological resources. The former was accomplished by identifying names of some patients and care-givers at the academy and matching those with death certificates that indicated that after death the remains of those persons were all interred in local cemeteries or shipped to remote cemeteries for burial. No evidence for direct association of the project area with Dr. Ferdinand Ludwig Herff was discovered. However, according to one reference found, another member of the Herff family, also a physician, performed an emergency appendectomy at the St. Mary’s Sanitarium. In spite of a diligent search, no additional information about the origins or functions of Features 8 and 9 was found. Further details regarding the research methods and findings are presented in Appendix IV.

**Survey-Level Testing of Features 8-10.** Fieldwork for additional survey-level archeological investigations of Features 8 and 9, and for survey-level testing of a tenth feature subsequently found, was performed on November 3 and 4, 2009. Phase II GPS mapping of all hand-dug test units, backhoe excavations, and features was done to sub-decimeter accuracy with a Trimble GNSS instrument.
Feature 8 (Figures 7, 9, and 10) is a concrete-bordered enclosure, a possible foundation remnant of a small house or outbuilding. During Phase II work, three test units (Figure 10), each about a meter long and a half meter wide, were quickly hand excavated in or adjacent to the feature as observed at the surface and mapped during Phase I work. All excavated matrix was screened through quarter-inch-mesh hardware cloth and all artifacts were collected from the screened fraction. Two units were excavated adjacent to the concrete foundation footing or curb along the outside of the rectangular enclosure, and one was excavated adjacent to that footing on the inside of the enclosure. Each unit was excavated to approximately 20 cm below the surface, where undisturbed natural clay soil was slightly penetrated. A single backhoe scrape (BS 1) about a meter wide and two meters long was also excavated along one outside edge of the enclosure to a depth of about 20 cm, using the same screening and collection methods. Those excavations revealed that the narrow (about 12 cm wide at the top) concrete border of the enclosure was poured in place, apparently using 2” x 4” boards as forms at the top, with rough ditch sides as earthen forms below the boards. Total depth of the concrete was about 30 cm below the tops, which were very roughly finished.

Figure 9. Diagrammatic Plan of Feature 8 vicinity (matches Inset 1 of Figure 7) showing locations of Test Units 1-3 and Backhoe Scrape 1 in relation to character oak tree and structural elements. Based on STARS Trimble data to sub-decimeter accuracy.
Figure 10. Six of nine features found during Phase I work. Clockwise from top left (numbers in parentheses match those in text and Figure 7 in orange): stone-lined well (1), stone foundation ruins near Main Street (4), L-shaped stone footing (5), small depression and Shovel Test 13 (9), rectangular concrete foundation (8) and clay tile-and-concrete-lined well or cistern.
Artifacts from the screened fractions consisted of only about a dozen or so items (Figure 11), including several round-head, machine-manufactured wire nails; clear bottle glass fragments (a few evincing factory seams and threaded mouths), brown (beer?) bottle glass fragments; small scraps of tin (siding or roofing?) with apparent nail holes; fencing staples; one cast iron vessel (kettle?) rim fragment, one cut bone fragment, one burned chert flake, and short segments of thin wire. None contained embossings or other manufacturer’s marks, or had unique attributes. They were therefore not archeologically remarkable, or in the strict sense, temporally diagnostic. All were photographed on the screen during fieldwork and then re-buried at the bottoms of their associated test units.

Based on basic physical attributes, those artifacts probably originated between about 1935 and 1945, and are part of the evidence suggesting that Feature 8 was built and used as an agricultural or horticultural shed or similar structure during about that interval. Apparently the superstructure of the feature was subsequently demolished, leaving only the foundation footing enclosure. The remaining evidence for that interpretation was the general shape and size (about 3-4 meters square) of the enclosure, the use of large surplus concrete chunks (previously used, salvaged, and imported, rather than poured in place) with ragged edges for construction of the west side of the enclosure, and the presence within the matrix excavated from Test Unit 3 of a large percentage by volume of small rounded gravels that apparently were imported and spread across the interior of the enclosure for a rough floor.

No evidence for any other purpose or use of the enclosure was found, suggesting that it was not part of a small cottage ward of the St. Mary’s Sanitarium, as was previously speculated based on archival (particularly Sanborn map) data found during Phase I work. Also, two parallel sides of the enclosure were aligned approximately north-south, whereas the Sanborn maps of the sanitarium show them to have sides parallel and perpendicular to Main Street, which trends about 30 degrees west of north in that vicinity. The limestone-block foundation footing remnants previously found (4 and 5 in orange, in Figure 7) are also aligned parallel and perpendicular to the street and seem to be virtually congruent with the footprints of some of the sanitarium walls shown on the Sanborn Maps.
Nine additional backhoe scrapes (BS 2-10; Inset 2 of Figure 7, Figure 12) conducted in the vicinity of Feature 9 revealed that the feature consisted of three small pits, each about a meter in diameter and about one to one-and-a-half meters deep. The pits were about 4-5 meters apart and were aligned roughly north-south. They manifested at the surface as three small (about a meter in diameter and 20 cm deep), but spatially discrete, basin-like
depressions. As exposed during backhoe excavations, the pits were readily distinguishable below the surface by the differences in color and compaction of matrix on their interiors compared with surrounding natural clay loam and caliche soils. The fill in the pits was considerably less compacted than surrounding soils and was a medium gray, fine-textured clay loam with about 30 percent by volume, very small, rounded gravels. A backhoe excavation at each depression site found a matching pit beneath the surface. In those three excavations, about a sixth of each cubic meter excavated was screened with quarter-inch-mesh hardware cloth. The remainder of the machine excavated matrix was spread on the adjoining ground surface and carefully troweled through in search of cultural evidence.

The pit below the depression previously investigated by shovel testing (see location for Shovel Test 13 shown in Figure 7) yielded only several dozen, yellowish-colored bricks (Figure 10, at bottom) without marker’s marks, which apparently are classic generic bricks that were probably manufactured in Laredo, Texas, beginning in about the early 1890s and widely used in central and south Texas from then through about the first quarter of the twentieth century (cf. Clark 1989; Nightengale et al. 1989; Wright et al. 1997:73). The bricks were randomly oriented and distributed within about the upper half meter below the surface. Most were within the pit’s lateral footprint, near the surface, but several were also scattered within about a half meter of the footprint. There was no definitive evidence that the pit was brick lined or capped.

During the first pit excavation, a roughly straight alignment of three courses of dry-laid “Laredo” bricks, several meters long, was discovered near the outer edge of the excavation and about 20-30 cm below the surface. It was designated Feature 10 and was mapped and photographed as such. A lower course was laid long-edge-to-long-

Figure 13. Two views of Feature 10 (brick rows). Shown at left is the feature as exposed by hand excavations and backhoe scraping during the STARS Phase II fieldwork in early November, 2009, with the southern-most of three small, shallow pits (as exposed by Backhoe Scrape 2) in the background. Shown above is the southern end of the brick row near Backhoe Scrape 2. See Inset 2 of Figure 7 for location of features and scrapes.
edge, with lengths perpendicular to the trend of the main alignment, with brick ends evenly aligned, and with largest surfaces of bricks placed flat on the ground, which was probably a buried prior surface. The two upper courses were laid standing on edge, on top of the lower course and centered on it, with lengths parallel to the main alignment. Small hand test excavations below portions of the alignment encountered only natural reddish clay soil immediately beneath the lower course. Ephemeral traces of deteriorated wood, which might have been the remnants of very thin plywood or sheeting, were seen between the two upper courses of the bricks in a few places along the alignment.

The remaining backhoe scrapes (BS 5-10), were excavated within a rough, approximately 15-square-meter area in the immediate vicinity of Features 9 and 10, and to depths of between about 20 and 30 cm below the surface (to natural basal reddish clay or yellowish caliche with many small limestone gravels). They were dug in search of extensions of those features or other Historic-period features that might have been present in that vicinity.

The only artifacts found during investigations of those two features were a few small whiteware (probable ironstone) ceramic sherds without makers marks or patterns, an apparent bicycle pedal metal bracket, a few small, very thin pieces of scrap sheet metal, and one round-head, machine-manufactured wire nail. All were found during screening of excavated matrix or while troweling through backhoe-dug matrix from the interior of the third (northernmost) of the three pits of Feature 9.

The Principal Investigator believed Features 9 and 10 were probably fairly contemporaneous and functionally associated, and estimated (because of the presence of Laredo bricks, as previously described) that they originated between about 1900 and 1920. However, the bike pedal bracket found in one of the pits was thought to have originated substantially later than that.

At the conclusion of the Phase II archeological work, the Principal Investigator was uncertain about the purposes or functions of Features 9 and 10. That was in good part because they are within Lot 11, for which no appreciable land use history was found during the background research, and because title research revealed that both the sanitarium and the academy were probably confined mostly to Lot 12 to the north. At that time it was speculated that the pits might have been temporary latrines or part of a more permanent sewage disposal system, or they might have been dug to plant large specimen trees, and the brick alignment might have been part of a flower bed edging, but there was no particular evidence for any of those interpretations. The lack of small artifacts in the interiors of the pits effectively eliminated the possibility that they originated or functioned much for trash disposal. The Phase II background research revealed that some tuberculosis sufferser sent to the sanitarium apparently lived temporarily in tent camps somewhere around Boerne, either while waiting to be treated or while being treated. This led to further speculation that the pit features might have been latrines or components of more extensive sewage systems that were finally filled during about the 1950s, when a bicycle pedal bracket of about that age might have been discarded into them.

Also at the conclusion of the Phase II work, it appeared that the cultural resource research potential of Features 8-10 was effectively exhausted and that those features were not historically or archeologically significant, either individually or collectively. No further archeological work under applicable cultural resource statutes and regulations that might apply to the initial phase of construction for the proposed project appeared to be warranted, either for those features or within the portion of the project area that did not contain other features found to that time. The Principal Investigator then recommended to the THC and the City of Boerne that construction work should proceed without further cultural resource compliance work within the areas investigated by STARS unless additional archeological resources were found in those areas after that time. The only proviso of that recommendation was that, per agreement between the THC and the city, the other features found to that time and a substantial buffer zone around them should be avoided by the current phase of construction, and by any future project-related disturbances, until those features were investigated per Antiquities Code of Texas requirements.
Phase III - January 10 and 11, 2010

Phase III work was performed in response to finds by city staff and construction workers of two additional, discrete, Historic-period cultural features, Features 11 and 12, not found by STARS because they were not readily detectable by standard survey-level techniques. Feature 11 (Inset 2 of Figure 7 and Figure 14) consisted of a small (about one meter square) brick pad about 30 centimeters below the 2010 surface within the library foundation footprint, in the general vicinity of Feature 10. Feature 12 was an apparent trash dump remnant (Inset 3 of Figure 7 and Figure 15), part of which was revealed at the surface during brush clearing along the western creek margin.

Prior to deployment of the archeological team, Feature 11 was pedestaled by mechanized construction scraping so that its upper surface was about 30 centimeters above the surrounding grade. Archeological work on the feature consisted of vertical sectioning by hand excavations designed to trace its vertical and lateral extent, and discover, as feasible, its origin and purpose, and whether or not it was associated with any artifacts other than bricks. The feature proved to consist entirely of three layers of the same type of Laredo-style bricks of estimated 1900 to 1920s vintage that were found associated with Features 9 and 10. The layers apparently were carefully dry stacked to form two support layers and an upper layer, which seemed to have been designed for use as a small porch or landing, or perhaps as a support pad for something placed on top of the upper layer. However, no particular evidence was found for such interpretations and the origin and function of the feature were not determined.

As manifested at the surface, Feature 12 appeared as a small (about 2 x 3 meters), moderate-density scatter of Historic-period artifacts (Figure 16) about 8 meters west of the channel of the unnamed tributary of Cibolo Creek extending through the project area. The artifacts were directly associated with a slight depression of about the same size in the gentle slope leading to the creek’s edge. Numerous limestone chunks, apparently of natural origins, were mixed with the artifacts, which included items of

Figure 14. Two views of Feature 11 (brick pad). Top: As exposed by construction excavations prior to hand sectioning. Bottom: After hand sectioning. Note limestone bedrock at bottom of section ditch.
ceramics, glass, metal, and plastic. The feature also included a discrete pile of rusted metal debris (Figure 17), including scraps of tin siding or flashing, wire, cans, and barrel hoops. Backhoe Scrape 11 was dug to determine, to the extent feasible, the feature’s depth, integrity or significance, and the density of artifacts in the subsurface portion. The entire matrix (about a third of a cubic meter) excavated during the scrape was screened through quarter-inch-mesh hardware cloth, and all artifacts (N = 153) from the screened fraction were collected (Table 1, Figure 18).

![Figure 15. Approximate extent (as outlined by orange pin flags) of surface manifestation of Feature 12 trash dump. Note concentration of rusted metal in foreground. See aerial overlay and Inset 3 of Figure 7 for location within project area, map of surface artifacts, and estimated feature boundary.]

Based on the general physical attributes and appearance of the 153 artifacts collected from the screened fraction of Backhoe Scrape 11 and the 14 artifacts collected from the ground surface in the vicinity of Feature 12, and on analysis of maker’s marks, patterns, embossings, and other identifying attributes of those artifacts, all are estimated to have originated between about 1890 and 1925. Only two (Figure 18) were believed to be of more than passing interest archeologically: the remnant of a small zinc container for Blanco 101, a paste manufactured during World War I by Joseph W. Pickering & Sons of Sheffield, England, for use in restoring the color of canvas military belts and strapping (see Inset 3 of Figure 7, No. 14, for provenience); and a small, amber glass bottle manufactured by Eastman Kodak Company, of Rochester, New York, to contain one of its powdered photographic developing chemicals (see Inset 3 of Figure 7, No. 5, for provenience).
Interpretations and Recommendations

Based on results of the Phase I work, the Principal Investigator believed that the chert artifacts observed and documented were all of prehistoric origins. Two apparent arrowpoint preforms that were found suggest that at least some of the chert artifacts might have been made during the Late Prehistoric period of the culture history of central Texas. All of those artifacts were found on the surface on the west side of the tributary segment, within a secondary context on severely deflated or eroded upland flats or gentle slopes, or on the steeper slopes leading to the channel. No clusters or concentrations were seen. It was obvious that the entire project area was disturbed by decades of modern human and domestic livestock activities. Therefore the Principal Investigator believed that the component of 41KE—— represented by those artifacts is not eligible for landmarking according to applicable antiquities and historic preservation statutes and regulations, and does not warrant further research or preservation.
Figure 17. Representative artifacts from a discrete concentration of rusty metal at the surface of the Feature 12 trash dump, as photographed by STARS during fieldwork with meter stick for scale. See Figure 15 and Inset 3 of Figure 7 for provenience.

Also based on the results of the Phase I work, the Principal Investigator believed the small artifacts found that originated during the Historic period were all within disturbed surface or near-surface secondary contexts similar to those of the chert artifacts. None of those Historic-period artifacts were found in association with structural remnants, traces, or features, and no discrete clusters or concentrations were found. Although many similar artifacts found during the subsequent phases of work were associated with structural features, none were found in contexts unequivocally associated with the St. Mary’s Sanitarium, the Holy Angel’s Academy, other important past occupations or uses of the project area, or with Dr. Ferdinand Ludwig Herff or any other persons or groups prominent in the history of Boerne, the State of Texas, or the United States. All are estimated to have originated between about 1890 and 1950.

Therefore the Principal Investigator believed that all but two of the artifacts collected during all phases of work did not warrant further research or curation and should be discarded according to Chapter 26 Rules of Practice and Procedure for the Antiquities Code of Texas, 26.27 (f)(2)(B): “Objects that lack historical, cultural, or scientific value”. The only artifacts recommended for curation are the remnant of the small zinc container for Blanco 101 and the small, amber glass bottle for powdered photographic developing chemicals previously described (Figure 18). In collaboration with the THC and the City of Boerne, the Principal Investigator recommended that those two artifacts should be held in trust by the city until future archeological work is done within the part of the project area not included in the Civic Campus project at the time of the STARS 2009 and 2010 investigations, and then curated in conjunction with that work.

Based on the overall findings, the Principal Investigator believed that upon further investigation six of the nine Historic-period structural remnants seen might have the potential to yield information important to the history of the City of Boerne and the central Texas region, and that they are therefore potentially eligible for listing in the National Register of Historic Places, and/or for designation as State Archeological Landmarks or Recorded Texas Historic Landmarks. Those six are the remnants of the stone-lined well; the concrete-and-clay-tile-lined well or cistern; the linear limestone footing wall segment; the L-shaped limestone foundation wall segment; the depression that could indicate the presence of a buried well, cistern, or trash pit; and the concrete-bordered enclosure that could be the foundation remnant of a small house or outbuilding, all previously described in this report (Figure 7).
Table 1. Artifacts from Backhoe Scrape 11, Feature 12 Trash Dump, Screened Fraction.

Note: The 153 small artifacts listed were collected from about a third of a cubic meter of backhoe excavated and screened matrix. All artifacts that were retained on the screen were collected.

<table>
<thead>
<tr>
<th>Ceramics</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earthen Ware</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bristol Glazed</td>
<td>1</td>
<td>sewer pipe fragment</td>
</tr>
<tr>
<td>Crock Ware</td>
<td>5</td>
<td>miscellaneous vessel sherds</td>
</tr>
<tr>
<td>White Ware</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decorated</td>
<td>3</td>
<td>plate sherds with blue floral pattern</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>miscellaneous sherd with brown fleur-de-lis pattern (plate ?)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>miscellaneous sherd with orange decalcomania floral (?) pattern</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>miscellaneous cup sherds with gold rims and/or bands</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>miscellaneous sherds with blue decalcomania floral (?) pattern</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>miscellaneous sherd with red decalcomania floral (?) pattern</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>miscellaneous sherd with hand-painted tan splotches</td>
</tr>
<tr>
<td>Marked</td>
<td>1</td>
<td>base sherd (scallop edged; probably for cream or sugar) marked with indigo “Royal…” and British lion crest (Royal Ironstone)</td>
</tr>
<tr>
<td>Undecorated</td>
<td>26</td>
<td>miscellaneous body sherds</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>cup or saucer sherds (with bottom rims)</td>
</tr>
<tr>
<td>Glass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aqua</td>
<td>10</td>
<td>miscellaneous body shards</td>
</tr>
<tr>
<td>Brown/Ampber</td>
<td>21</td>
<td>miscellaneous body sherds (apparently used for whiskey or beer)</td>
</tr>
<tr>
<td>Clear</td>
<td>25</td>
<td>miscellaneous body sherds</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>bottom fragments (rectangular)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>patterned</td>
</tr>
<tr>
<td>Purple</td>
<td>6</td>
<td>miscellaneous body sherds (including two fused together by fire)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>cork-type bottle neck fragments</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>bottom fragment (round, embossed with “Patent No. 65”)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1</td>
<td>deep blue body shard</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>deep olive body sherds (apparently for wine)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>green body shard</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>red body shard (apparently used for soda)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>milk glass rim fragment</td>
</tr>
<tr>
<td>Metal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire</td>
<td>1</td>
<td>miscellaneous segment (approximately 12 inches long and 16 guage?)</td>
</tr>
<tr>
<td>Nails</td>
<td>2</td>
<td>round wire and head, mass produced, 16p and 16p</td>
</tr>
<tr>
<td>Nuts</td>
<td>1</td>
<td>thin, flat, hexagonal, aluminum (?) lock nut (7/8 inch ?)</td>
</tr>
<tr>
<td>Screws</td>
<td>1</td>
<td>1.25” long wood screw (flat blade head type)</td>
</tr>
<tr>
<td>Tin Cans</td>
<td>1</td>
<td>partial rim and body fragment from square can (food ?)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>round can end fragments (from small food cans ?)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>elongate can lid fragment with hinge (from McCormick spices ?)</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>miscellaneous can rim fragments (from small food cans ?)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>half-inch-diameter flat washer</td>
</tr>
<tr>
<td>Plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto Parts</td>
<td>1</td>
<td>vacuum hose connector or valve</td>
</tr>
<tr>
<td>Asbestos/Metal Composite?</td>
<td>1</td>
<td>brake pad fragment</td>
</tr>
</tbody>
</table>

The Principal Investigator believed that pending future investigation, those features, or substantial portions of them, were relatively intact and probably were remnants of buildings, structures, or objects directly or indirectly associated with the St. Mary’s Sanitarium and/or the Holy Angel’s Academy built and used during the late nineteenth and early twentieth centuries. The development and maintenance of those institutions apparently had a major impact on the growth of the town of Boerne during those times (Appendix II).
Some archival data found indicate that during the years 1896-1897 the general population of Boerne was actually slightly smaller than the number of patients and staff at the St. Mary’s Sanitarium (Appendix II). The data also indicate that one of the principal founders of the sanitarium might have been Dr. Ferdinand Ludwig Herff, a prominent person in the history of Boerne and central Texas and in the German-Texan heritage of the nineteenth and early twentieth centuries. According to Cruz and Alvaredo (2009), “Herff was instrumental in the building of St. Mary’s Sanitarium in Boerne, as an adjunct to Santa Rosa Hospital of San Antonio.”

The well or cistern remnants found might contain small, period artifacts associated with the sanitarium and the academy that might reveal unique information about the history, material culture, or architecture of those institutions that can only be obtained through archeological research. Therefore the Principal Investigator also believed that additional future archeological investigations of those features was warranted according to the Antiquities Code of Texas and applicable professional standards, prior to demolition or other construction-related disturbances, if avoidance was not an option.
Figure 19. Three views of two interesting artifacts collected from the surface near the Feature 12 trash dump. Shown at left is the remnant of a zinc can for “Blanco 101” canvass cleaning and coloring paste, sold during the World War I era by Joseph W. Pickering and Sons, Ltd., of Sheffield, England, to the military of various counties world wide. Shown at right in all three views is an amber photographic developing fluid bottle sold in this type of bottle during the 1920s by Eastman Kodak Company, Rochester, New York. See Appendix V for additional information.
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Appendix I

Summary of Phase I Archival and Historical Background Research
Summary of Phase I Archival and Historical Background Research

Imogen R. Cooper, AICP

The project area is north of the core of downtown, bounded on the east by the old railroad tracks and a creek bed. Across from the project area is St. Helena’s Episcopal Church at 410 North Main. The location of the church is important because it might have been contemporaneous with any late-nineteenth-century construction within the project area; namely, the St. Mary’s Sanitarium (a tuberculosis sanitarium) and Holy Angel’s Academy (a Catholic school) that allegedly occupied the property from the late 1890s through about the mid 1920s or early 1930s.

Background research for the proposed Boerne Civic Center project area began with procurement of copies of all relevant information gathered by City of Boerne Senior Planner Paul Barwick. The information provided by Mr. Barwick consisted of a partial title chain, historic aerial and ground photographs, a copy of a historic postcard, copies of 1910, 1924, and 1937 Sanborn Map Company maps, and some relevant internet data. The aerial photograph that was most useful was one taken in 1938 that Mr. Barwick used in the recent Boerne by Design R/UDAT Plan.

An interview with local historian Col. Bettie Edmonds, Retired, was next conducted. Col. Edmonds is the Director of the Boerne Area Historical Preservation Society Archives. Serving as a volunteer, she works regularly at the Boerne Public Library where she has direct access and extensive knowledge of Boerne’s historic building archives. On Friday, May 1, 2009, I walked and photographed the project area while the archeological survey was in progress.

On May 4, 2009, I spent several more hours with Col. Edmonds, at the Boerne public library, reviewing and copying additional relevant information. The address assigned to the project area in the archives is 401 North Main Street. I learned that according to the Boerne Area Historical Preservation Archives, the St. Mary’s Sanitarium and the Holy Angels Academy were indeed built within the project area as described above. Also, both were apparently once owned by the Sisters of Charity of the Incarnate Word.

On May 4, 2009, I also conducted additional Internet research for several topics including: the site; tuberculosis; about St. Mary’s Sanitarium; the Holy Angels Academy; the Sisters of Charity of the Incarnate Word; and Annie Fellows Johnston, a famous author from the early twentieth century whose step-son died in Boerne from tuberculosis while seeking a cure. Ms. Fellows owned a house in Boerne while she wrote and published several books. I also downloaded and examined all the Sanborn maps for the town of Boerne available from the public site for Sanborn maps for the State of Texas.

On May 6, 2009, I again reviewed all the material that Mr. Barwick provided including the 1938 historic aerial photograph, a partial ownership record, and a recently completed historic district survey for the City of Boerne that was done for the City by the College of Architecture at the University of Texas at San Antonio. I also read a detailed description of the St. Mary’s Sanitarium (also known as the White Gables Sanitarium) in a compendium of tuberculosis sanitariums called Sanatoria for Consumptives in Various Parts of the World (found on May 4, 2009, at googlebooks.com). In that source, the description of the main building, outbuildings, and grounds closely matches the Sanborn map data for 1910/Sheet 1.

Also, the elevation of the St. Mary’s building given in Sanatoria for Consumptives is 1438.’ Current topographic maps show the elevation of the southwest corner of the project area as 1430’. Additional internet research revealed that Sanatoria for Consumptives in Various Parts of the World is just one of numerous guides written for people looking for a cure for tuberculosis before the age of antibiotics. Such guides rival hotel
promotionals, giving costs, accommodations, and treatment descriptions, in an age before modern curative treatments were known. Clean air and altitude were among the most important criteria for “consumptives” looking for a cure.

The Sanborn maps were the only evidence obtained that showed any plan views of the St. Mary’s Sanitarium and the Holy Angels Academy. Unfortunately those maps did not show the spatial relationships of the buildings to each other, to other structures or features, or to side streets, along Main Street, and left the buildings “floating” along a north-south axis. However, they indicated that the sanitarium was 2000 feet north of the post office in 1910 (see Figure 5 of main text). On Sheet 2 of the 1910 Boerne Sanborn Map, the Boerne Post Office is shown at the intersection of Depot Street and Main Street. According to Col. Edmonds, Depot Street was Rosewood Street at the time of the archival study.

During archeological fieldwork, a Garmin Etrex Vista C hand-held Global Positioning System receiver was used to establish the distance to a point along Main Street 2000 feet north of Rosewood Street. That point was remarkably close to several partial stone foundation remnants (items 4 and 5 in orange in Figure 7 of main text) seen during archeological fieldwork at the surface within the Civic Campus project area.

The Holy Angels Academy is listed on the 1910 Sanborn map as 1000 feet north of the school. The school building appeared on early-twentieth-century-age Sanborn maps to have been where the city offices were on Blanco Road in 2009. Other background data revealed that Blanco Road was once called School Road. This implies that Holy Angels Academy might have been just east of St. Mary’s Sanitarium, but further research would be needed to confirm or negate that inference.
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Sanborn Maps for Boerne, Texas, 1910, 1924, 1937.


Appendix II

Excerpt from Sanitoria for Consumptives in Various Parts of the World

1899
SANATORIA FOR CONSUMPTIVES

IN VARIOUS PARTS OF THE WORLD

(FRANCE, GERMANY, NORWAY, RUSSIA, SWITZERLAND, THE UNITED STATES AND
THE BRITISH POSSESSIONS)

A CRITICAL AND DETAILED DESCRIPTION

TOGETHER WITH AN EXPOSITION OF

THE OPEN-AIR OR HYGIENIC TREATMENT OF PHTHISIS

BY

F. RUFINACHT WALTERS, M.D., M.R.C.P.

FELLOW OF THE ROYAL COLLEGE OF SURGEONS; PHYSICIAN TO THE NORTH LONDON
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

WITH AN INTRODUCTION

BY

SIR RICHARD DOUGLAS POWELL, BART., M.D., F.R.C.P.

LONDON

SWAN SONNENSCHEIN & CO., LIM.
PATERNOSTER SQUARE
1899
WHITE GABLES SANITARIUM,

or St. Mary's Sanitarium, is at Boerne, Kendall Co., S.W. Texas. The town of Boerne, which was originally a colony of Germans, is on the river Cibolo, about thirty miles northwest of San Antonio, with which it is connected by rail. It contains about 700 inhabitants, and has no factories except

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ing one cotton gin, and is surrounded by very hilly country with deep gulches. The climate is a very good one for consumptives; average rainfall, 26 inches; mean temperature in January, about 56°, in July about 89°, with usually a pleasant breeze in summer. The soil is a black loam over limestone.

The sanatorium is situated 1428 feet above the sea-level, in ten acres of ground, which is wooded to the north and east, and laid out as a flower garden and shrubbery to the south. It is sheltered from the north by a range of hills, and is open to the south.

The building is arranged round three sides of an open courtyard, the main block of three floors being at the western end, with a one-storey projection on the north side of the courtyard, and a separate block to the east containing chapel, kitchen and laundry. The main block has four rooms on the ground floor, in addition to the office, nurse's room and vestibule; on the next floor are a reading-room, small kitchen, and seven other rooms; on the top floor a nurse's room, two large wards and two other large rooms. Along the western side of the block is a large verandah, with a balcony above it; along the lateral prolongation is another long verandah. There are water-closets on each floor, and a bath-room at the eastern end of the ground floor. The heating and lighting are somewhat primitive, and some of the rooms have no chimney. There is accommodation for twenty-five patients; the bedrooms are 10 feet high, and vary from $10 \times 12$ to $16 \times 16$, and face in every direction.
The sanatorium belongs to the Sisters of the Incarnate Word (R.C.); it was originally an old stone building bought by Dr. Wm. Miller, who acted as medical officer until last year, when it passed medically under the management of Dr. A. H. Davidson, and was completely reconstructed. The number of nurses varies according to need.

Consumptives in every stage are admitted, as well as sufferers of both sexes from other ailments. Infectious

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cases are not admitted. Patients spend much time in the open air. The douche is not employed. Cod-liver oil, with or without maltine, is often given. Paquin's serum was tried in some cases, but without much success. The sputa are disinfected by "chlorides," spitting flasks being used indoors and handkerchiefs out of doors. Linen is disinfected by boiling.

The charges are from $25 to $90 per month.

I am indebted to Dr. Miller for an account of his system of managing the institution. Mainly intended for consumptives, it was necessary also to provide rooms for other medical and surgical cases, which were placed in a different part of the building. Acute and advanced cases were admitted to the institution, but hopeless cases were sent home. Early and quiescent (first and second stage) cases were not retained in the building, but sent on to one of a number of cottage sanatoria in the surrounding country, which were gradually organised by Dr. Miller. These consisted of a number of detached cottages of two and three rooms, well built and ventilated, with a central dining hall and sitting-room, all comfortably furnished. Five such sanatoria were built up under his supervision, with accommodation for about 150 visitors, who were lodged and boarded with an abundance of well-cooked suitable food for about £5 per month. During 1896-7, 731 patients were under treatment at the sanatorium and the auxiliary resorts, with the following results:—
114 SANATORIA IN AMERICA—WESTERN STATES.

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>Stage</th>
<th>Average number of days under treatment</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improved</td>
</tr>
<tr>
<td>1896, 420</td>
<td>First 73</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Second 102</td>
<td>31</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Third 245</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>First 52</td>
<td>20</td>
<td>29</td>
</tr>
<tr>
<td>1897, 311</td>
<td>Second 69</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Third 190</td>
<td>48</td>
<td>18</td>
</tr>
</tbody>
</table>

Died.

Reference

Walters, F. Fufenacht, M.D.
tarium,+Boerne,+Texas&source=bl&ots=gGWa5_Taf9&sig=fT1L1eg5ZdyiW5o2OqNCdsY6Djo&hl=en&ei=bKP_SbqhHeCrtgeZtOmFBw&sa=X&oi=book_result&ct=result&resnum=5
Appendix III

Descriptive and Photographic Inventory

of Phase I Surface Artifacts
<table>
<thead>
<tr>
<th>No</th>
<th>Area</th>
<th>Collected</th>
<th>Date</th>
<th>Description/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>plastic African-American male doll head - probably of very recent origins</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>tan Edwards chert core width = 8 cm; length = 12.5 cm; thickness = 3.3 cm</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>tan Edwards chert core width = 6.3 cm; length = 11.1 cm; thickness = 2.9 cm</td>
</tr>
<tr>
<td>4</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>Edwards chert thinned bifacial medial fragment (gray-black with pop outs due to heating) width = 2.2 cm; length = 1.7 cm; thickness = 0.40 cm</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>tan Edwards chert thick biface fragment (not photographed or measured)</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>tan Edwards chert thinned biface fragment - distal portion? (not measured)</td>
</tr>
<tr>
<td>7</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>Historic-period whiteware ceramic fragment with partial maker’s mark: “Royal… W &amp; [?] E [?]”</td>
</tr>
<tr>
<td>8</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>Historic-period whiteware ceramic fragment with partial maker’s mark: “Mellor &amp; [?]”</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
<td>Y N</td>
<td>5-1-09</td>
<td>grayish-blue Georgetown (?) chert thinned biface fragment - missing basal and distal portions width = 2.1 cm; length = 4.5 cm; thickness = 0.60 cm</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
<td>Y N</td>
<td>5-5-09</td>
<td>tan Edwards chert arrowpoint preform fragment - missing distal portion width = 2.3 cm; length = 2.2 cm; thickness = 0.25 cm</td>
</tr>
<tr>
<td>11</td>
<td>A</td>
<td>Y N</td>
<td>5-5-09</td>
<td>tan Edwards chert arrowpoint preform fragment - missing distal portion width = 2.1 cm; length = 2.3 cm; thickness = 0.10 cm</td>
</tr>
<tr>
<td>12</td>
<td>A</td>
<td>Y N</td>
<td>5-5-09</td>
<td>tan Edwards chert thinned biface distal fragment width = 2.2 cm; length = 4.9 cm; thickness = 0.60 cm</td>
</tr>
<tr>
<td>13</td>
<td>A</td>
<td>Y N</td>
<td>5-5-09</td>
<td>blue-gray shell button (whole)</td>
</tr>
<tr>
<td>14</td>
<td>B</td>
<td>Y N</td>
<td>5-5-09</td>
<td>two Historic-period whiteware ceramic fragments with partial maker’s marks: “Wood &amp; [?]” and “Austria M Z” England”</td>
</tr>
<tr>
<td>No</td>
<td>Area</td>
<td>Collected</td>
<td>Date</td>
<td>Description/Comments</td>
</tr>
<tr>
<td>----</td>
<td>------</td>
<td>-----------</td>
<td>-------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>15</td>
<td>B</td>
<td>Y N</td>
<td>5-5-09</td>
<td>tan Edwards chert scraper (?) or small core (?)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>width = 3.7 cm; length = 7.3 cm; thickness = 1.5 cm</td>
</tr>
<tr>
<td>16</td>
<td>B</td>
<td>Y N</td>
<td>5-5-09</td>
<td>tan Edwards chert core fragment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>width = 5.7 cm; length = 8.0 cm; thickness = 2.3 cm</td>
</tr>
<tr>
<td>17</td>
<td>B</td>
<td>Y N</td>
<td>5-5-09</td>
<td>Historic-period whiteware ceramic fragment with partial</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>maker’s mark: “BP” “GRANTED” “M”</td>
</tr>
<tr>
<td>18</td>
<td>A</td>
<td>Y N</td>
<td>5-5-09</td>
<td>tan Edwards chert scraper (?)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>width = 4.7 cm; length = 10.8 cm; thickness = 1.6 cm</td>
</tr>
<tr>
<td>19</td>
<td>A</td>
<td>Y N</td>
<td>5-5-09</td>
<td>brown Edwards chert micro-core (?)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>width = 3.4 cm; length = 4.6 cm; thickness = 1.3 cm</td>
</tr>
</tbody>
</table>
Figure 1. Surface Artifact Finds 1-4 and 6-9 (numbers match those in accompanying log) as photographed where found during fieldwork, and enlargements as insets.
Figure 2. Surface Artifact Finds 10-19 (numbers match those in accompanying log) as photographed where found during fieldwork, and enlargements as insets.
Appendix IV

Summary of Phase II Archival and Historical Background Research
Summary of Phase II Archival and Historical Background Research

Imogen R. Cooper, AICP

**Research Target 1:** Information about the presence or absence of historic-period human graves within or near the project area.

I reviewed burial records of the former institutional owner and operator of the St. Mary’s Sanitarium, the Congregation of the Sisters of Charity of the Incarnate Word (CSCIW) in San Antonio. The CSCIW is a well-known order of Roman Catholic nuns, who for the past century were called to nurse and to teach throughout the South Texas area.

The CSCIW’s St. Mary’s Sanitarium appeared to be the last owner of a tuberculosis sanitarium operated at the Boerne Civic Campus project area under that name. It was a charity hospital as well as a paying hospital known mainly for treatment of tuberculosis, and it offered care for very ill and dying people from 1898, when it opened as St. Mary’s Sanitarium, to 1930. It initially treated tuberculosis patients transferred from the Santa Rosa Hospital in San Antonio so that they would not infect otherwise healthy patients at Santa Rosa, or those who found their way to Boerne, Texas, from all over the United States. Later, St. Mary’s Sanitarium treated only nuns from within the CSCIW who contracted tuberculosis, perhaps by exposure to their patients with the disease.

At the time of this research the CSCIW had an archive as well as a heritage museum in Alamo Heights, Texas, and employed a professional archivist, Ms. Eva M. Sankey, Head of Archives and Heritage Museum for the CSCIW. On October 14, 2009, I interviewed Ms. Sankey and her Assistant Archivist, Angel Lane, at the archive, and reviewed and copied some of their files about the St. Mary’s Sanitarium and the Holy Angels Academy in Boerne, Texas.

Ms. Sankey confirmed what she had told me during previous phone conversations: There was no record of burials in the nun’s “daily diaries” about St. Mary’s Sanitarium and Holy Angels Academy, or any records in the Congregation’s archives of any patient burials at the site of the St. Mary’s Sanitarium. She said nuns indeed died there, after contracting tuberculosis while nursing patients in San Antonio, or while nursing patients in Boerne at the St. Mary’s Sanitarium, and their bodies were brought back to San Antonio, Texas, for burial in the Congregation’s “Mother House Cemetery” just north of the chapel. She believed all of the Congregation’s nuns are buried there. Also, since the St. Mary’s Sanitarium was a charity hospital, some homeless patients could not be sent home to die (as was the common practice according to *Sanatoria for Consumptives in Various Parts of the World* by F. Fufenacht Walters, M. D. [London: Swan Sonnenschenin & Co, Lim., 1899]) and would die at the sanitarium. Thus, I next searched the Congregation’s archives and found a list titled “Catholic Nuns and the Patients in St. Mary’s Sanitarium in 1920,” that included names of 10 nuns and 31 patients. It was a photocopy from the Boerne Historical Archives of a matrix made from a 1920 United States Census. I subsequently found a primary copy, on-line, of the actual matching Census document through Ancestry.com (See accompanying copy of *Fourteenth U.S. Census:1920 Population: City of Boerne, Sheet Number 10.*)

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1 Eva M. Sankey, Head of Archives and Heritage Museum for the Congregation of the Sisters of the Incarnate Word, as interviewed by author, October 14, 2009. Ms. Sankey stated that the Sisters purchased the hospital in 1896 and opened it in 1898. The last sister was assigned there in 1928. Some sisters were patients there until 1930, when they were transferred to another home, St. Francis, in San Antonio.
2 Boerne, Texas, had a long-standing reputation in the late nineteenth century for being a town whose altitude and clean air somehow had a good effect on people suffering with lung diseases. At that time there were no medicines effective in the treatment of tuberculosis. Many believed in the curative properties of sunshine, altitude, even cold air, and camped out in tents to take the cure. But rest, nutritious food, and, of course, clean air always helps the body’s own defenses against a lung disease.
3 The Congregation also owned and operated a regular Catholic school on this same property, called the Holy Angeles Academy. It opened the same year as the St. Mary’s Sanitarium.
I took the list to the Kendall County Courthouse, County Clerk’s Office, Vital Statistics for the City of Boerne, and with the help of Assistant County Clerk Paula Pfeiffer, searched the Birth and Death Register Book Number 1, looking for matching names of nuns and patients who died at Boerne during that decade, and their burial places. The register is a large ledger book, with names alphabetized for the years 1920 through 1930, and categories for listings of Date Filed, Place of Death, Full Name, Sex, Race, Marital Status, Father, Mother, Date of Death, Cause of Death, Name of Physician or Coroner, Address (of Physician/Coroner) Date of Burial, Name of Undertaker, and Address of Undertaker.

I found two names in the register from the 1920 census list of patients, Sadie T. Carnes and Loren E. Wilson. Sadie T. Carnes died March 15, 1920, at the St. Mary’s Sanitarium and was buried in Brenham, Texas. Loren E. Wilson died June 28, 1920, and was buried out of state in Oklahoma. The undertaker for both was Edward Ebensberger of Ebensberger Funeral Home of Boerne, Texas, the only undertaker listed in the register and still in business today in Boerne. I found no other matches.

Research Target 2: Information about whether or not Dr. Ferdinand L. Herff is positively associated historically with the project area.

During the same visit to the CSCIW archive, I also consulted Ms. Sankey about any possible direct historical association of Dr. Ferdinand Ludwig Herff (1820-1912) with St. Mary’s Sanitarium. She stated that he was always very involved with the Congregation, but that there was no record in the archives of his direct involvement with the St. Mary’s Sanitarium in Boerne. The records I examined suggested that in 1869 Herff helped found Santa Rosa Hospital, which was operated by the CSCIW as San Antonio’s first public infirmary. However, those records also revealed that although Herff played a major role by convincing the Congregation to sponsor development of the hospital, many other San Antonians also helped fund and build it. Thus, there was much pride in having a fine hospital in San Antonio and Dr. Herff worked with many others towards that end.

I next contacted the Texas Medical Association by phone on October 28, 2009, and spoke with its archivist, Ms. Betsy Tyson. Ms. Tyson looked through their only file on Dr. Herff in search of the targeted information. In response to an email I sent her, on October 29, she emailed that she had “reviewed the file of Dr. Ferdinand L. Herff and found no mention of the connection to tuberculosis sanitariums.”

At Tyson’s suggestion, I also contacted the Bexar County Medical Society. Dr. Herff was a founder of the Society in 1853. On the morning of October 29, 2009, I spoke with Ms. Melody Newsom, the Society’s Chief Operating Officer. She checked their files for me that afternoon, but found nothing about Dr. Herff having ever been associated with St. Mary’s Sanitarium.

Herff’s home was at 414 Navarro in San Antonio (the site of the Nix Hospital). He was the City’s Public Health Officer in 1860 as well as active in other city affairs. He served as a surgeon in the Confederate Army (although his Union sympathies were well known) and was an officer for San Antonio Bank, and a City Alderman. However, home ownership, professional success, and civic involvement did not satisfy him. In his book, The Doctors Herff: A Three Generation Memoir, grandson Dr. Ferdinand Peter Herff, relates that his grandfather purchased 300 acres for a ranch near Boerne from John James. The author also relates that at one time the Herff family owned thousands of acres, including land from Camp Stanley and Camp Bullis. He writes that his grandfather once had to perform an emergency surgery for a daughter-in-law at the family ranch house (built in 1854, subsequently destroyed by fire, and later rebuilt on the same property) in Boerne, but there is no evidence in the book for any association of his grandfather with St. Mary’s Sanitarium.

Author Herff also relates that his grandfather often discouraged those with incurable lung diseases from coming to Boerne because his detractors had blamed him for bringing “hopeless consumptives” to Boerne. However, author Herff speculates that it was probably the arrival of the railroad in Boerne, giving easy access to the

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4 THC Historical Marker No. 12345 (Site of the Home of Dr. Ferdinand Ludwig Herff) 414 Navarro, San Antonio, Texas; on south/River side of building (Nix Hospital).
6 Ibid.
town, and the area’s altitude and clean, dry air with low humidity, that were major factors in attracting consumptives. Also, he mentions that Boerne was not crowded and the local population had a reputation for a resistance to tuberculosis.\(^7\)

**Research Target 3: Information about any pre-1870s or other significant, Historic-period associations of the project area (land use history prior to about 1870, including complete deed chain data: grantor, grantee, date of transaction, type of transaction, etc.)**

I searched the Texas General Land Office records on-line and the Kendall County Courthouse deed records. One deed (Vol. 26, Pages 187-189) from the courthouse records is noteworthy because it helps date the construction of the St. Mary’s Sanitarium, which was initially called White Gables Sanitarium, to before 1896. It also establishes that the sanitarium was expanded after its purchase in 1897 by the Sisters of Charity of the Incarnate Word. The deed conveyed Tract 12, described as 10 acres, and White Gables Sanitarium and its contents. The purchase price is $9,000 and the sellers were William Miller and wife Ada L. Miller to the Congregation of the Sisters of Charity of the Incarnate Word. In *Sanatoria for Consumptives in Various Parts of the World*, a “Dr. Miller” is mentioned by Walters (op. cit. 1899) as the managing physician of the White Gables Sanitarium of Boerne, Texas.

The legal description of the project area is Boerne Original Town, Lot 11, Pt 12, Acres 15.6289. The Town of Boerne was laid out by John James in 1852 and Lots 11 and 12 are clearly shown in their Map of Town of Boerne (see accompanying copy). Tract 12 is the northernmost and highest of the two lots and is a natural location for a sanitarium because it would best catch the seasonal breezes carrying fresh air.

\(^7\) Ibid.
Appendix V

Additional Information About Two Artifacts Collected for Curation
Canvas Coloring Paste Can Fragment

**Note:** Provenience is shown in main text Figure 7, Inset 3, No. 14; see also Figure 19 of main text. Most information was obtained from the internet sources cited. South Texas Archeological Research Services, LLC (STARS), does not warrant accuracy of the information, either expressly or implicitly.

Figure 1. Three views of bottom of zinc can for Blanco that was found on the ground surface near the Feature 12 trash dump remnant. At top left is a scanned image without tracings. At top right is the same scanned image with tracings in white. Shown at bottom are tracings only, in black. Blanco was a product of Joseph W. Pickering & Sons, Ltd., of Sheffield, England. It was a paste or cake that was used by soldiers worldwide to restore or change the color of canvass belts and strapping, by application with a moistened brush or cloth. Internet research revealed that the type of Blanco represented by this can fragment apparently was manufactured and sold as “Blanco 101” only during the World War I era. The actual can fragment was measured with calipers at about 7.36 centimeters in outside diameter, and the bottom is shown above at actual size.
The remaining information in this appendix about Blanco 101 is from http://www.blancoandwebbing.co.uk/how-to-apply-blanco/.

**First clean your webbing**

It is always best to clean your webbing first, even if brand spanking new. Unblanco’d webbing will then ‘take’ the treatment better and previously treated webbing will be returned to a colour, dirt and grease-free state.

Remove brass ware where possible. If it isn’t possible then now is the time to clean the brass – metal polish residue that gets on the webbing will removed in the cleaning process.

Using a stiff nail brush (or similar bristle brush) and a soap flake solution get scrubbing! The entire blanco process is messy from beginning to end – its a job for the garage or outdoors, not the dining room table. Thoroughly scrub all your webbing and rinse thoroughly.

**Applying your Blanco**

This is the ‘wet’ method of application.

Get yourself a small container – a plastic cap off a spray can will do but I’m using a small ceramic pet’s bowl. Crumble into it a chunk of Blanco. Add sufficient amount of water and mix thoroughly. How much water? The colour or the liquid needs to be solid but the consistency needs to be thin. You are not applying a paste nor painting a pretty watercolour. The colour you are applying will soak right into the webbing, not just apply a surface finish. Make the solution to thick and you will be wasting blanco that will have to be brushed off afterwards, make it too thin and you will have to apply two or more coats to get a decent evenness of colour. Err on the side of being too dilute – the inconvenience of having to re-coat is better than wasting valuable Blanco.

The Blanco solution will need to be stirred every time you dip the brush in as it drops to the bottom. I suppose more accurately you have a thin slurry rather than a solution of colour like a dye would be and there is a very high percentage of solids in the Blanco compound.

To apply the Blanco solution I am using a stencil brush obtainable from a DIY store but a small old paintbrush with cut-down bristles is just as good. The idea is to use the short bristles to get a good ’scouring’ action rubbing the colour into every crevice, pore and thread of the webbing.

Start ‘painting’. Load the brush with solution and apply to dry or just-damp webbing. The liquid needs to soak down into the fibres as you are rubbing with the brush in all directions. This ensures colour goes into the webbing fibres not just sit on the top. Work back and forth as quick as you can but do be thorough. Pay attention to the edges, seams, joins and attachment points. Don’t let one end of the piece dry out before you have done. Be methodical! By the way, don’t apply Blanco to the back of straps, pouches or packs or unseen areas. Not only will it rub off on your clothing but its a pointless waste of valuable Blanco.

Continue the process until all of your webbing is done then hang to dry. Once dry take a stiff hand brush and give the webbing a quick once over to remove excess powder from the surface otherwise it will just end up on your clothes. Do this outside or you will turn your living room green!
Figure 2. Applying Blanco as described on previous page.
Figure 3. Sale Catalog data for Khaki Blanco No. 104 and Blanco No. 101. The zinc can fragment found by STARS in 2010 on the surface near the Feature 12 trash dump at the City of Boerne Civic Campus project area apparently was for Blanco 101.
Photographic Developing Powder Bottle

Note: Provenience is shown in main text Figure 7, Inset 3, No. 5; see also Figure 19 of main text. All information was obtained from the internet sources cited. South Texas Archeological Research Services, LLC (STARS), does not warrant accuracy of the information, either expressly or implicitly.

The following information about George Eastman and the Eastman Kodak Company is from http://www.answers.com/topic/kodak-trademark.

Founded: 1880
Incorporated: 1901

Late 19th-Century Origins: Photography for the Masses

The company bears the name of its founder, George Eastman, who became interested in photography during the late 1870s while planning a vacation from his job as a bank clerk in Rochester, New York. Taking a coworker's suggestion to make a photographic record of his intended trip to Santo Domingo, the 24-year-old Eastman soon found that the camera, film, and wet-plate-developing chemicals and equipment he had purchased were far too bulky. Instead of following through with his original vacation plans, Eastman spent the time studying how to make photography more convenient. He discovered a description of a dry-plate process that was being used by British photographers. He tried to replicate this process in his mother's kitchen at night after work.

After three years Eastman produced a dry glass plate with which he was satisfied. In 1880 he obtained a U.S. patent for the dry plate and for a machine for preparing many plates at one time, and he started manufacturing dry plates for sale to photographers. Henry A. Strong, a local businessman impressed by Eastman's work, joined him on January 1, 1881, to form the Eastman Dry Plate Company. Eastman left his position at the bank later that year to give his complete attention to the new company.

The new venture almost collapsed several times during its early years because the quality of the dry plates was inconsistent and Eastman insisted that the defective plates be replaced at no charge to the customer. Despite these setbacks, he was determined to make the camera "as convenient as the pencil."

As his business grew, Eastman experimented to find a lighter and more flexible substitute for the glass plate. In 1884 he introduced a new film system using gelatin-coated paper packed in a roll holder that could be used in almost every plate camera available at that time. Also that year, the company was reorganized as Eastman Dry Plate and Film Company. Strong was president and Eastman treasurer and general manager of the 14-shareholder corporation. The company also opened a sales office in London in 1885 to take advantage of the growing European photography market.

In 1888 Eastman's company introduced its first portable camera. Priced at $25, it included enough film for 100 pictures. After shooting the roll of film, the owner sent both the film and the camera to Rochester for processing. For $10, the company sent back the developed prints and the camera loaded with a new roll of film. This breakthrough is considered to be the birth of snapshot photography. It was also at this time that Eastman trademarked "Kodak," which he invented by experimenting with words that began and ended with his favorite letter, "K." The company advertised its new camera extensively using the slogan, "You push the button, we do the rest."

The following year, the Eastman Photographic Materials Company was incorporated in the United Kingdom to distribute Kodak products beyond the United States from its headquarters in London. The company built a
manufacturing plant in 1891 outside London to accommodate the growing product demand overseas and set up additional distribution sites in France, Germany, and Italy by 1900. In 1889 the firm's name was changed to Eastman Company and in 1892 to Eastman Kodak Company of New York.

Eastman was committed to bringing photography to the greatest number of people at the lowest possible price. As his company grew and production of both the camera and film increased, manufacturing costs decreased significantly. This allowed the firm to introduce a number of new cameras, including the Folding Pocket Kodak Camera, the precursor of all modern roll-film cameras, in 1898. It also introduced the first of a complete line of Brownie cameras, an easy-to-operate model that sold for $1 and used film that sold at 15 cents per roll, in 1900. The following year, the company was reorganized and incorporated in New Jersey as Eastman Kodak Company.

Continuing New Product Success

Over the next 20 years, the company continued to introduce photographic innovations. In 1902 Kodak brought to market a developing machine that allowed film processing without benefit of a darkroom. The 1913 introduction of Eastman Portrait Film provided professional photographers with a sheet film alternative to glass plates.

In 1912 George Eastman hired Dr. C. E. Kenneth Mees, a British scientist, to head one of the first U.S. industrial research centers. Based in Rochester, New York, this lab was where various tools and manufacturing processes that provided the company with a continuing stream of new products in the 1920s were invented. These new products, which included 16-millimeter Kodacolor motion picture film, the 16-millimeter Cine-Kodak motion picture camera, and the Kodascope projector (all of which debuted in 1923), were targeted at the mass market and priced appropriately.

Kodak developed other new products to support the country's involvement in World War I. In 1917 the company developed aerial cameras and trained U.S. Signal Corps photographers in their use. It also supplied the U.S. Navy with cellulose acetate, a film product, for coating airplane wings, and produced the unbreakable lenses used on gas masks. Following the war, Eastman became president of the company upon Strong's death in 1919.
Figure 4. Internet data for vintage Eastman Kodak Company photographic developing powder bottle of the type found by STARS in 2010 on the surface near the Feature 12 trash dump at the City of Boerne Civic Campus project area. From http://www.flickr.com/photos/captkodak/272746539/ and http://www.flickr.com/photos/captkodak/272746538/in/photostream/.

In the era before digital, instant cameras, or taking your film to the corner drug store, if you wanted to take photographs for a living, you had to be good with your chemistry too. If you’ve done your own darkroom work, you know we had it good—safe chemicals, premeasured in handy, disposable plastic bottles or foil pouches. But at the turn of the 20th century, you purchased your chemicals in bulk and mixed what you needed for right then—because it didn’t keep. Also, you were dealing with chemicals that, well, let’s say would require you to keep an MSDS today!

To facilitate the mixing of chemistry, Kodak delivered the chemicals in small glass bottles (to ensure you got “fresh” chemistry) and made “studio scales” to facilitate the mixing of the powders. This is an example of one of those scales. Manufactured sometime between 1912 and 1948 by Eastman Kodak—note the “EK” in the center of the scales’ gimble. It measures approx. 9 x 4 inches and has its full, six-piece weight set and two 3-1/2 inch measuring trays. The small chemistry bottle (see detail photo) is traditional “brown glass” of the era and bears the Kodak name and “Tested Chemicals” seal. It’s about 3 inches high.