INTENSIVE ARCHAEOLOGICAL SURVEY OF THE 50-ACRE VANTAGE AT KITTY HAWK PROJECT AREA, CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS

Prepared for

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ABSTRACT

On behalf of AOH – Vantage at Kitty Hawk, LLC, SWCA Environmental Consultants (SWCA) conducted an intensive archaeological survey of the 50-acre proposed Vantage at Kitty Hawk project area in northeastern Bexar County, Texas. The project is located north of the intersection of Miller Road and Kitty Hawk Road, approximately 1 mile south of IH-35. The proposed undertaking involves the development of the 50 acres into a residential complex. The extent of subsurface impacts is not currently known, but it is anticipated to include the construction of subsurface and above ground infrastructure, roadways, and other impacts associated with the construction of buildings on the property. As a result, the Area of Potential Effects (APE) is the entire 50-acre project area. Cultural resource investigations were conducted in compliance the City of San Antonio Historic Preservation and Design Section of the Unified Development Code (Article 6 35-630 to 35-634).

SWCA conducted a background review and an intensive archaeological survey of the 50-acre project area. The background literature review revealed that the project had not been previously surveyed nor are there any previously recorded archaeological sites within the APE.

SWCA archaeologists conducted field investigations within the Vantage at Kitty Hawk project area on December 2, 2008. A total of 24 shovel tests, all of which were negative for cultural material, were excavated throughout the entire 50-acre project area. Shovel testing and pedestrian survey conducted within the project area did not identify any cultural materials. Based on these results, no cultural resources will be affected by any construction activities within the project area. SWCA recommends no further archaeological investigations within the project area.

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MANAGEMENT SUMMARY

PROJECT TITLE: Intensive Archaeological Survey of the 50-acre Vantage at Kitty Hawk Project Area, City of San Antonio, Bexar County, Texas.

SWCA PROJECT NUMBER: 15094-053-AUS.

PROJECT DESCRIPTION: SWCA conducted archaeological investigations of the 50-acre project area in northeastern Bexar County, Texas, on behalf of AOH – Vantage at Kitty Hawk, LLC. who intends to develop the tract as a residential complex. Work involved a background review and an intensive pedestrian survey.

LOCATION: The project area is in northern San Antonio, Bexar County, Texas and is depicted on the Shertz USGS 7.5-minute topographic quadrangle map. The project area is just north of the intersection of Kitty Hawk Road and Miller Road, approximately 1 mile south of IH 35.

NUMBER OF ACRES SURVEYED: Approximately 50 acres.

PRINCIPAL INVESTIGATOR: Christian T. Hartnett.

DATES OF WORK: December 2, 2008.

PURPOSE OF WORK: The client is fulfilling project regulatory requirements in compliance with the City of San Antonio Historic Preservation and Design Section of the Unified Development Code (Article 6 35-630 to 35-634).

NUMBER OF SITES: None.

ELIGIBILITY OF SITES: No sites were documented as a result there are no sites recommended as eligible for listing on the NRHP or as a SAL.

CURATION:. No artifacts were collected; as a result, no curation was necessary.

INTRODUCTION

On behalf of AOH-Vantage at Kitty Hawk, LLC SWCA Environmental Consultants (SWCA) conducted an intensive archaeological survey of the proposed 50-acre Vantage at Kitty Hawk project area in northeastern San Antonio, Bexar County, Texas (Figure 1). The project area is located north of the intersection of Miller Road and Kitty Hawk Road. The project area is owned by AOH-Vantage, LLC and is intended to be developed as a residential complex. The extent of subsurface impacts is not currently known, but it is anticipated to include the construction of subsurface and above ground infrastructure, roadways, and other impacts associated with the construction of buildings on the property.

Cultural resource investigations were conducted in compliance the City of San Antonio Historic Preservation and Design Section of the Unified Development Code (Article 6 35-630 to 35-634). The entire 50 acres of the project area is the Area of Potential Effects (APE).

The archaeological investigations for this project included a 100 percent intensive archaeological survey of the project area with shovel testing throughout the entire project area. The goal of the work was to locate all prehistoric and historic archaeological sites in the project area, establish vertical and horizontal site boundaries as appropriate, and provide sufficient information to significance recommendations. All work was done in accordance with the standards and guidelines of the Texas Historical Commission (THC) and the Council of Texas Archaeologists (CTA).

PROJECT AREA DESCRIPTION

The project area is triangular in shape and is bounded on the east by Kitty Hawk Road, on the west by Miller Road, and on the north by a drainage parallel to Misty Ridge Road.

The majority of the project contains open to moderately dense stands of mesquite, cedar, and live oak trees and was likely used as a cattle ranch. The project area general slopes from southwest to northeast towards an ephemeral drainage. The remnants of the former alignment of Miller Road runs along the western boundary of the property.

ENVIRONMENTAL SETTING

GEOLOGY

The project area is bisected by two geologic units, the Pecan Gap Chalk to the north and Navarro Group and Marlbrook Marl Undivided to the south.

Pecan Gap Chalk is part of the Anacacho Limestone, Pecan Gap Chalk, and Austin Chalk complex, it is chalk and chalky marl that is very light yellow to yellowish brown in color. This component was formed in the upper cretaceous period. It weathers to from moderately deep soil and is seldom exposed. The component is on average 100 to 400 feet thick (Barnes 1983).

Navarro Group and Marlbrook Marl undivided is also known as upper Taylor marl, it becomes Escondido Formation west of Bexar County. The upper part of this component is comprised of marl, clay, sandstone, and siltstone. The marl and clay contain concretions of limestone and siderite. The sandstone is fine grained and is found in beds that have little lateral continuity. The siltstone is yellow brown in color and contains concretions of hard bluish-gray limestone 2 to 10 feet in diameter. This upper part can have a thickness of up to 580 feet. The lower part is comprised of clay that is greenish gray to brownish gray in color, and weathers to a very

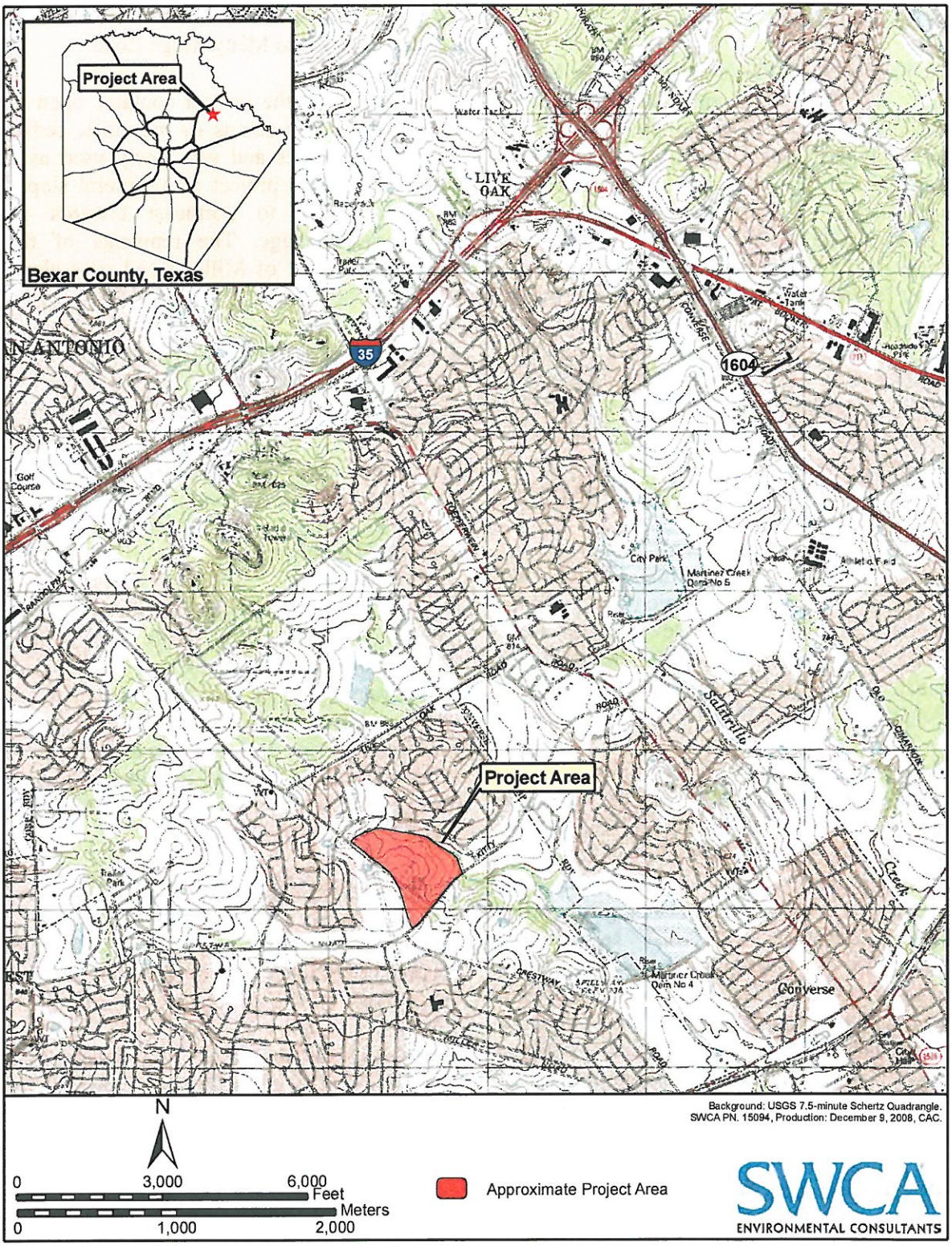

Figure 1. Project location map.

thick, black, clayey soil. This part has an average thickness of 400 feet (Barnes 1983).

Soils

According to Taylor et al. (1991), the primary soil unit with in the project area is the Heiden-Ferrish complex, 5 to 10 percent slopes, severely eroded (Figure 2). This soil unit is found on ridges at elevations between 400 to 1,000 feet and its slopes range from 5 to 10 percent. The parent material of the Heiden is clayey residuum weathered from clayey shale of eagleford shale or taylor marl. The soil is clay throughout all of its four layers (0-80 inches) and is well drained. The depth of the water table is more than 80 inches and it is never flooded. The soil's available water capacity is moderate and it is nonsaline. The Ferris soil's parent material is residuum weathered from calcareous shale in eagleford shale and taylor marl formations of cretaceous age. It is well drained and the water table is more than 80 inches. This soil is never flooded, is nonsaline, and its available water capacity is moderate. It consists of clay throughout its 3 layers (0-84 inches).

A small section of the project area is Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded. This soil complex is found on flood plains and its slopes range from 0 to 1 percent. The Tinn soil's parent material is clayey alluvium of Holocene age derived from mixed sources. This soil is moderately well drained and the depth to the water table is more than 80 inches. It is frequently flooded but does not pond. It is a nonsaline soil and the available water capacity is high. The soil is clay throughout its three layers (0-8 inches, 8-65 inches, and 65-80 inches). The Frio soil's parent material is Loamy alluvium of Holocene age derived from mixed sources. The soil is well drained and the depth to the water table is more than 80 inches. The soil is frequently flooded but ponding does not occur. Its available water capacity is high. The soil's top two layers (0-30 inches and 30-50 inches) consist of silty clay loam, while the lower layer (50 to 80 inches) is clay loam.

The remainder of the soils within the project area is classified as Houston black clay, 1 to 3 percent slopes (HuB), and 3 to 5 percent slopes (HuC). The surface layer is typically black clay with gravels to a depth of 38 inches. The subsurface layer, 12 inches thick, is clay or gravelly clay.

Vegetation

The project area is situated along the southern margin of the Balconian biotic province (Blair 1950). This province has highly variable vegetation of the Edwards Plateau and Hill country (Spearing 1991:24). Typical vegetation of the Edwards Plateau region consists of Texas oak (*Quercus texana*), live oak (*Quercus virginiana*), Mexican cedar (*Juniperus mexicana*), mesquite (*Prosopis glandulosa*), some bald cypress (*Taxodium distichum*), and grass prairies (Blair 1950; Simpson 1988; Spearing 1991). As noted above, the general vegetation of the 50 acres mostly comprised of mesquite, cedar, and live oak.

Fauna

The Balconian biotic province is a transitional zone from the mesic forests of eastern North America to the xeric grasslands of the central United States. Thus, this province has a high faunal diversity. Blair (1950) identified at least 57 species of mammal, over 42 species of reptile, and 15 species of amphibians. None of the fauna for the Balconian is restricted solely to this province (Blair 1950).

Some mammals common to the Balconian province include: coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), mink

Figure 2. Soils map.

(*Mustela vison*), muskrat (*Ondata zibethica*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), white-tailed deer (*Odocoileus virginianus*), oppossum (*Didelphis virginiana*), eastern pipistrel (*Pipistrellus subflavus*), eastern fox squirrel (*Sciurus niger*), eastern cottontail rabbit (*Sylvilagus floridanus*), pocket gopher (*Geomys breviceps*), pallid bat (*Antrozous pallidus*), valley pocket gopher (*Thomomys bottae*), and badger (*Taxidus taxus*) (Burt and Grossenheider 1976). Historically, red wolf, bison and black bear ranged into or near this region (Burt and Grossenheider 1976).

The general reptilian assemblage for this province include the Great Plains rat snake (*Elaphe guttata emoryi*), Eastern yellowbelly racer (*Coluber constrictor flaviventris*), Yellow mud turtle (*Kinosternon flavescan flavescan*), bullfrog (*Rana catesbiana*), southern leopard frog (*Rana utricularia*), and the gulf coast toad (*Bufo vallicepus*) (Blair 1950; Conant and Collins 1998; Kutac and Caran 1994).

CULTURAL SETTING

PREHISTORIC CULTURAL HISTORY

The project area falls within Central Texas Archaeological Region (Pertulla 2004). Although the archaeological regions are not absolute, they do generally reflect recognized biotic communities and physiographic areas in Texas (Pertulla 2004:6). The Central Texas Region, as its name implies, is situated in the center of Texas and covers the Edwards Plateau and portions of the Blackland Prairie east of the Edwards Plateau. The following synopses provide basic culture histories of the Central Texas Archaeological Region.

The archaeological record of the Central Texas Archaeological Region is known from decades of investigations of stratified open air sites and rockshelters throughout the Edwards Plateau, its highly dissected eastern and southern margins, and the adjoining margins of physiographic regions to the east and south (see Collins [2004] for review). Traditionally, the Central Texas Archaeological Region has included the Balcones Canyonlands and Blackland Prairie—that is, areas north of San Antonio (e.g., Prewitt 1981; Suhm 1960). These two areas are on the periphery of the Central Texas Archaeological Region, and their archaeological records and projectile point style sequences contain elements that suggest influences from, and varying degrees of, contact over time with other areas such as the Lower Pecos and Gulf Coastal Plain (Collins 2004; Johnson and Goode 1994). Archaeological sites in these two areas of Bexar County that have contributed important information include the Richard Beene site at Applewhite Reservoir (McGraw and Hindes 1987; Thoms et al. 1996; Thoms and Mandel 1992), the Cibolo Crossing site at Camp Bullis (Kibler and Scott 2000), the Panther Springs Creek site in Bexar County (Black and McGraw 1985), the Jonas Terrace site in Medina County (Johnson 1995), the Camp Pearl Wheat site in Kerr County (Collins et al. 1990), 41BX1 in Bexar County (Lukowski 1988), 41BX300 in Bexar County (Katz 1987), and several sites at Canyon Reservoir (Johnson et al. 1962). For more-complete bibliographies concerning archaeological work done in the region, see Black (1989), Collins (1995), and Johnson and Goode (1994).

PALEOINDIAN PERIOD

Surficial and deeply buried sites, rockshelter sites, and isolated artifacts represent Paleoindian (11,500–8,800 B.P.) occupations of the Central Texas Archaeological Region (Collins 2004:116). The period is often described as having been characterized by small but highly mobile bands of foragers who were specialized hunters of Pleistocene

megafauna. However, Paleoindians probably used a much wider array of resources (Meltzer and Bever 1995:59), including small fauna and plant foods. Faunal remains from Kincaid Rockshelter and the Wilson-Leonard site (41WM235) support this view (Bousman 1998; Collins 1998; Collins et al. 1989). Longstanding ideas about Paleoindian technologies also are being challenged.

Collins (2004) divides the Paleoindian period into early and late subperiods. Two projectile point styles, Clovis and Folsom, are included in the early subperiod. Clovis chipped stone artifact assemblages, including the diagnostic fluted lanceolate Clovis point, were produced by bifacial, flake, and prismatic-blade techniques on high-quality and oftentimes exotic lithic materials (Collins 1990). Along with chipped stone artifacts, Clovis assemblages include engraved stones, bone and ivory points, stone bolas, and ochre (Collins 2004:116; Collins et al. 1992). Clovis points are found evenly distributed along the eastern edge of the Edwards Plateau, where the presence of springs and outcrops of chert-bearing limestone are common (Meltzer and Bever 1995:58). Sites within the area yielding Clovis points and Clovis-age materials include Kincaid Rockshelter (Collins et al. 1989), Pavo Real (Henderson and Goode 1991), and San Macros Springs (Takac 1991). A probable Clovis polyhedral blade core and blade fragment was found at the Greenbelt site in San Antonio (Houk et al. 1997). Analyses of Clovis artifacts and site types suggest that Clovis peoples were well-adapted, generalized hunter-gatherers with the technology to hunt larger game but did not solely rely on it.

In a survey of fluted points reported from throughout the state, Bever and Meltzer (2007:72) identified 151 Clovis points recovered from the counties comprising the Central Texas region. However, only four Clovis points have been recorded for Bexar County (Bever and Meltzer (2007:67). Bever and Meltzer (2007:91) also determined that roughly 76 percent of the Clovis point raw material originated from the Edwards Plateau, but the distribution suggests the Clovis groups focused on the Nueces-Guadalupe Plain in the South Texas region.

In contrast, Folsom tool kits—consisting of fluted Folsom points, thin unfluted (Midland) points, large thin bifaces, and end scrapers—are more indicative of specialized hunting, particularly of bison (Collins 2004:117). Folsom points have been recovered from Kincaid Rockshelter (Collins et al. 1989) and Pavo Real (Henderson and Goode 1991). Folsom point distributions, both the frequency and spatial patterning, differ from the Clovis patterns, suggesting a shift in adaptation patterns (Bever and Meltzer 2007; Meltzer and Bever 1995:60, 74). Folsom points appear more frequently in the coastal plain as well as the South Texas plain, located to the south and southeast of Bexar County. As Folsom points are almost exclusively found in plains settings (they are conspicuously lacking in the Edwards Plateau), the technology perhaps marks a more specialized adaptation, likely to a more intensive reliance on ancient bison.

Postdating Clovis and Folsom points in the archaeological record are a series of dart point styles (primarily unfluted lanceolate darts) for which the temporal, technological, or cultural significance is unclear. Often, the Plainview type name is assigned these dart points, but Collins (2004:117) has noted that many of these points typed as Plainview do not parallel Plainview type-site points in thinness and flaking technology. Recent investigations at the Wilson-Leonard site (see Bousman 1998) and a statistical analysis of a large sample of unfluted lanceolate points by Kerr and Dial (1998) have shed some light on this issue. At Wilson-Leonard, the Paleoindian projectile point sequence includes an expanding-stem

dart point termed Wilson, which dates to ca. 10,000–9,500 B.P. Postdating the Wilson component is a series of unfluted lanceolate points referred to as Golondrina-Barber, St. Mary's Hall, and Angostura, but their chronological sequence is poorly understood. Nonetheless, it has become clear that the artifact and feature assemblages of the later Paleoindian subperiod appear to be Archaic-like in nature and in many ways may represent a transition between the early Paleoindian and succeeding Archaic periods (Collins 2004:118).

ARCHAIC PERIOD

The Archaic period for the Central Texas Archaeological Region dates from ca. 8,800 to 1,300–1,200 B.P. (Collins 2004:119–121) and generally is believed to represent a shift toward hunting and gathering of a wider array of animal and plant resources and a decrease in group mobility (Willey and Phillips 1958:107–108). In the eastern and southwestern United States and on the Great Plains, development of horticultural-based, semi-sedentary to sedentary societies succeeds the Archaic period. In these areas, the Archaic truly represents a developmental stage of adaptation as Willey and Phillips (1958) define it. For Central Texas, this notion of the Archaic is somewhat problematic. An increasing amount of evidence suggests that Archaic-like adaptations were in place before the Archaic (see Collins 2004:118, 1998; Collins et al. 1989) and that these practices continued into the succeeding Late Prehistoric period (Collins 1995:385; Prewitt 1981:74). In a real sense, the Archaic period of the Central Texas Archaeological Region is not a developmental stage, but an arbitrary chronological construct and projectile point style sequence. Establishment of this sequence is based on several decades of archaeological investigations at stratified Archaic sites along the eastern and southern margins of the Edwards Plateau. Collins (1995, 2004) and Johnson and Goode (1994) have divided this sequence into three parts—early, middle, and late—based on perceived (though not fully agreed upon by all scholars) technological, environmental, and adaptive changes.

Early Archaic (8,800–6,000 B.P.) sites are small, and their tool assemblages are diverse (Weir 1976:115–122), suggesting that populations were highly mobile and densities low (Prewitt 1985:217). It has been noted that Early Archaic sites are concentrated along the eastern and southern margins of the Edwards Plateau (Johnson and Goode 1994; McKinney 1981). This distribution may indicate climatic conditions at the time, given that these environments have more reliable water sources and a more diverse resource base than other parts of the region. Early Archaic projectile point styles include Hoxie, Gower, Wells, Martindale, and Uvalde. Clear Fork and Guadalupe bifaces and a variety of other bifacial and unifacial tools are common to Early Archaic assemblages. Construction and use of rock hearths and ovens, which had been limited during late Paleoindian times, became commonplace. The use of rock features suggests that retaining heat and releasing it slowly over an extended period were important in food processing and cooking and reflects a specialized subsistence strategy. Such a practice probably was related to cooking plant foods, particularly roots and bulbs, many of which must be subjected to prolonged periods of cooking to render them consumable and digestible (Black et al. 1997:257; Wandsnider 1997; Wilson 1930). Botanical remains, as well as other organic materials, are often poorly preserved in Early Archaic sites, so the range of plant foods exploited and their level of importance in the overall subsistence strategy are poorly understood. But recovery of charred wild hyacinth (Camassia scilloides) bulbs from an Early Archaic feature at the Wilson-Leonard site provides some insights into the types of

plant foods used and their importance in the Early Archaic diet (Collins et al. 1998). Significant Early Archaic sites include the Richard Beene site in Bexar County (Thoms and Mandel 1992), the Camp Pearl Wheat site in Kerr County (Collins et al. 1990), and the Jetta Court site in Travis County (Wesolowsky et al. 1976).

During the Middle Archaic period (6,000–4,000 B.P.), the number and distribution of sites, as well as their size, probably increased as population densities grew (Prewitt 1981:73; Weir 1976:124, 135). Macrobands may have formed at least seasonally, or more small groups may have used the same sites for longer periods (Weir 1976:130–131). Development of burned rock middens toward the end of the Middle Archaic suggest a greater reliance on plant foods, although tool kits still imply a considerable dependence on hunting (Prewitt 1985:222–226). Middle Archaic projectile point styles include Bell, Andice, Taylor, Baird, Nolan, and Travis. Bell and Andice points reflect a shift in lithic technology from the preceding Early Archaic Martindale and Uvalde point styles (Collins 2004:119). Johnson and Goode (1994:25) suggest that the Bell and Andice darts are parts of a specialized bison-hunting tool kit. They also believe that an influx of bison and bison-hunting groups from the Eastern Woodland margins during a slightly more mesic period marked the beginning of the Middle Archaic. Though no bison remains were recovered or present, Bell and Andice points and associated radiocarbon ages were recovered from the Cibolo Crossing (Kibler and Scott 2000), Panther Springs Creek, and Granberg II (Black and McGraw 1985) sites in Bexar County. Bison disappeared as more-xeric conditions returned during the late part of the Middle Archaic. Later Middle Archaic projectile point styles represent another shift in lithic technology (Collins 2004:120; Johnson and Goode 1994:27). At the same time, a shift to more-xeric conditions saw the burned rock middens develop, probably because intensified use of a specific resource (geophytic or xerophytic plants) or resource patches meant the debris of multiple rock ovens and hearths accumulated as middens on stable to slowly aggrading surfaces, as Kelley and Campbell (1942) suggested many years ago. Johnson and Goode (1994:26) believe that the dry conditions promoted the spread of yuccas and sotols, and that it was these plants that Middle Archaic peoples collected and cooked in large rock ovens.

During the succeeding Late Archaic period (4,000 to 1,300–1,200 B.P.), populations continued to increase (Prewitt 1985:217). Within stratified Archaic sites such as Loeve-Fox, Cibolo Crossing, and Panther Springs Creek, the Late Archaic components contain the densest concentrations of cultural materials. Establishment of large cemeteries along drainages suggests certain groups had strong territorial ties (Story 1985:40). A variety of projectile point styles appeared throughout the Late Archaic period. Johnson and Goode (1994:29–35) divide the Late Archaic into two parts, Late Archaic I and II, based on increased population densities and perceived evidence of Eastern Woodland ceremonial rituals and religious ideological influences. Middle Archaic subsistence technology, including the use of rock and earth ovens, continued into the Late Archaic period. Collins (2004:121) states that, at the beginning of the Late Archaic period, the use of rock ovens and the resultant formation of burned rock middens reached its zenith and that the use of rock and earth ovens declined during the latter half of the Late Archaic. There is, however, mounting chronological data that midden formation culminated much later and that this high level of rock and earth oven use continued into the early Late Prehistoric period (Black et al. 1997:270–284; Kleinbach et al. 1995:795). A picture of

prevalent burned rock midden development in the eastern part of the central Texas region after 2,000 B.P. is gradually becoming clear. This scenario parallels the widely recognized occurrence of post-2,000 B.P. middens in the western reaches of the Edwards Plateau (see Goode 1991).

The use of rock and earth ovens (and the formation of burned rock middens) for processing and cooking plant foods suggests that this technology was part of a generalized foraging strategy. The amount of energy involved in collecting plants, constructing hot rock cooking appliances, and gathering fuel ranks most plant foods relatively low based on the resulting caloric return (Dering 1999). This suggests that plant foods were part of a broad-based diet (Kibler and Scott 2000:134) or part of a generalized foraging strategy, an idea Prewitt (1981) put forth earlier. At times during the Late Archaic, this generalized foraging strategy appears to have been marked by shifts to a specialized economy focused on bison hunting (Kibler and Scott 2000:125–137). Castroville, Montell, and Marcos dart points are elements of tool kits often associated with bison hunting (Collins 1968). Archaeological evidence of this association is seen at Bonfire Shelter in Val Verde County (Dibble and Lorrain 1968), Jonas Terrace (Johnson 1995), Oblate Rockshelter (Johnson et al. 1962:116), John Ischy (Sorrow 1969), and Panther Springs Creek (Black and McGraw 1985).

The Archaic period represents a hunting and gathering way of life that was successful and that remained virtually unchanged for more than 7,500 years. This notion is based in part on fairly consistent artifact and tool assemblages through time and place and on resource patches that were used continually for several millennia, as the formation of burned rock middens shows. This pattern of generalized foraging, though marked by brief shifts to a heavy reliance on bison, continued almost unchanged into the succeeding Late Prehistoric period.

Late Prehistoric Period

Introduction of the bow and arrow and, later, ceramics into the Central Texas Archaeological Region marked the Late Prehistoric period. Population densities dropped considerably from their Late Archaic peak (Prewitt 1985:217). Subsistence strategies did not differ greatly from the preceding period, although bison again became an important economic resource during the late part of the Late Prehistoric period (Prewitt 1981:74). Use of rock and earth ovens for plant food processing and the subsequent development of burned rock middens continued throughout the Late Prehistoric period (Black et al. 1997; Kleinbach et al. 1995:795). Horticulture came into play very late in the region but was of minor importance to overall subsistence strategies (Collins 2004:122).

In central Texas, the Late Prehistoric period generally is associated with the Austin and Toyah phases (Jelks 1962; Prewitt 1981:82–84). Austin and Toyah phase horizon markers, Scallorn-Edwards and Perdiz arrow points, respectively, are distributed across most of the state. Violence and conflict often marked introduction of Scallorn and Edwards arrow points into central Texas—many excavated burials contain these point tips in contexts indicating they were the cause of death (Prewitt 1981:83). Subsistence strategies and technologies (other than arrow points) did not change much from the preceding Late Archaic period. Prewitt's (1981) use of the term "Neoarchaic" recognizes this continuity. In fact, Johnson and Goode (1994:39–40) and Collins (2004:122) state that the break between the Austin and Toyah phases could easily and appropriately represent the break

between the Late Archaic and the Late Prehistoric.

Around 1,000–750 B.P., slightly more-xeric or drought-prone climatic conditions returned to the region, and bison came back in large numbers (Huebner 1991; Toomey et al. 1993). Using this vast resource, Toyah peoples were equipped with Perdiz point-tipped arrows, end scrapers, four-beveled-edge knives, and plain bone-tempered ceramics. Toyah technology and subsistence strategies represent a completely different tradition from the preceding Austin phase. Collins (1995:388) states that formation of burned rock middens ceased as bison hunting and group mobility obtained a level of importance not witnessed since Folsom times. Although the importance of bison hunting and high group mobility hardly can be disputed, the argument that burned rock midden development ceased during the Toyah phase is tenuous. A recent examination of Toyah-age radiocarbon assays and assemblages by Black et al. (1997) suggests that their association with burned rock middens represents more than a "thin veneer" capping Archaic-age features. Black et al. (1997) claim that burned rock midden formation, although not as prevalent as in earlier periods, was part of the adaptive strategies of Toyah peoples.

Historic Cultural History

The Historic period in central Texas theoretically begins with the arrival of Alvar Nuñez Cabeza de Vaca and the survivors of the Narváez expedition along the Texas coast in 1528. European incursions, however, into south-central Texas were initially rare, and the first Europeans did not settle in this region until around A.D. 1700 (Taylor 1996). Spanish incursions into the region from the late seventeenth century on left valuable information on native groups and tribes. Several scholars, including Hester (1989) and Newcomb (1961), have provided historical accounts of Native Americans and their interactions with the Spanish, the Republic of Mexico, the Texas Republic, and the United States throughout the region.

The beginning of the late seventeenth and early eighteenth centuries was an era of more-permanent contact between Europeans and Native Americans as the Spanish moved northward out of Mexico to establish settlements and missions on their northern frontier (see Castañeda [1936–1958] and Bolton [1970] for extended discussions of the mission system and Indian relations in Texas and the San Antonio area). There is little available information on aboriginal groups and their ways of life except for the fragmentary data Spanish missionaries gathered. In the San Antonio area and areas to the south, these groups have been referred to collectively as Coahuiltecans because of an assumed similarity in way of life, but many individual groups may have existed (Campbell 1988). Particular Coahuiltecan groups, such as the Payaya and Juanca, have been identified as occupying the San Antonio area (Campbell 1988). This area also served as a point of contact between the southward-advancing Apaches and the northward-advancing Spanish, with native groups often caught in between. Disease and hostile encounters with Europeans and intruding groups such as the Apache were already wreaking their inevitable and disastrous havoc on native social structures and economic systems by this time.

After a series of missions had been established in what would become eastern Texas, the Spanish government in the New World decided to begin settlement at a bend in the San Antonio River. The location was a convenient stopping point on the Camino Real, the newly established highway founded in 1691 by Domingo Terán de Los Ríos and Father Damián Massenet to connect Mexico to

the East Texas missions (Shuffler 1974). However, in 1719 war between France and Spain resulted in the withdrawal of the Spanish from the east Texas missions, who reestablished their mission communities near the settlement along the San Antonio River.

San Antonio River, the mission was moved to the west side around 1730. After a disastrous epidemic in 1739, the mission was moved to its present location on higher ground, more than one-half mile from the former site (Cruz 2008).

San Antonio became the capital of Spanish Texas in 1773. By 1778, the settlement had a population of 2,060 including those Indians living in the missions. However, conditions within the settlement were often describe as poor, resulting from its location of the edge of Spanish controlled Texas. The population was comprised of a mix of Europeans, mestizos, and a few slaves. By 1795, all the missions in San Antonio were secularized and Mission San Antonio de Valero, later called the Alamo, was converted to a military barracks (Fehrenbach 1978).

At the turn of the 19th century, growing independence movements began in Texas, spurred on by Mexico and other Latin American countries their fight for independence from Spain and. In 1813, an expedition, encouraged by the United States, set out from Louisiana and quickly moved through East Texas capturing Nacogdoches Trinidad de Salcedo, La Bahía, and San Antonio. The Gutiérrez-Magee expedition quickly declared Texas independent from Spain, forming the first Texas Republic. Intendance was short lived, however, as Spanish troops quickly retook the city after a battle in Medina, just south of San Antonio. Spain reestablished control of the city, declaring marshal law and severally punishing those inhabitants who had supported the insurrection (Schwarz and Thonhoff 1985).

San Antonio and Bexar County continued to be the sight of conflict between Texas and Mexico. During the Texas Revolution, several battles were fought in the county, including the siege of Bexar and the Battle of the Alamo. Following the establishment of the Republic of Texas, Bexar County was officially established in December of 1836 and the City of San Antonio was chartered a month later in January of 1837. The city continued to be a source of contention. In 1840, the Council House fight between the Comanche and city residents broke out in the streets after a failed attempt by to release captives held by the Comanche. The city was twice captured during Mexican invasions of Texas in 1842. As result, the population of San Antonio had dropped to 800 in 1846 (Fehrenbach 1978).

The entering of Texas into the Union saw a rapid increase in the cities population, growing to 3,500 in 1850 and to 8.235 in 1860. The rapid increase in population had been a direct result of the influx of German speaking settlers. Up until 1877, German speaking people outnumber both Hispanics and Anglos.

After the Civil War, San Antonio continued to grow larger, spurred on by the arrival of the railroad in 1877. The city served as the distribution point for the Mexico-US border as well as the rest of the southwest. At the turn of the 20th century, San Antonio was the largest city in Texas with a population of more than 53,000. Much of the city's grow after the Civil War was a result of an influx of southerners fleeing the decimated reconstruction era south. An additional population increase came after 1910, when large numbers of Mexicans began moving into Texas to escape the Mexican Revolution (Fehrenbach 1978).

Despite the cities rapid growth, it had not expanded beyond its original Spanish land grant until 1940, allowing for the establishment of several unincorporated suburbs, which were later annexed by the city as it expanded.

METHODS

HISTORICAL/ARCHIVAL RESEARCH AND BACKGROUND REVIEW

SWCA conducted a thorough archaeological background review of the project area. An SWCA archaeologist searched site files and maps at the Texas Archeological Research Laboratory (TARL) and the THC's Texas Archeological Sites Atlas (Atlas), an online database, for any previously recorded surveys and historic or prehistoric archaeological sites located in or adjacent to the project area. In addition to identifying previously recorded archaeological sites, the Atlas review included the following types of information: NRHP properties, SALs, Official Texas Historical Markers, Registered Texas Historic Land Marks, cemeteries, and local neighborhood surveys.

ARCHAEOLOGICAL FIELD METHODS

SWCA proposed to conduct an intensive archaeological field survey with shovel testing of the 50-acre Vantage at Kitty Hawk project area. Pedestrian survey and shovel testing would be of sufficient intensity to evaluate the presence or absence of cultural materials within the project area.

CTA guidelines recommend shovel testing of all areas unless there is the presence of shallow bedrock and surface visibility is greater than 30 percent. The shovel tests were approximately 30 cm in diameter and excavated to culturally sterile deposits or impassible limestone, whichever came first. The matrix from each shovel test was screened through ¼-inch mesh, and the location of each excavation was plotted using a hand-held GPS receiver. Each shovel test was recorded on a standardized form to document the excavations

ARTIFACT COLLECTION

SWCA proposed a non-collection survey. Artifacts were tabulated, analyzed, and documented in the field, but not collected. Temporally diagnostic artifacts were described in detail and photographed in the field. Only especially rare artifacts or discoveries were to be collected.

RESULTS

PREVIOUS INVESTIGATIONS

The results of the background review determined there have been no previous archaeological surveys or previously recorded archaeological sites within the APE.

Within one mile of the project area there are three previously recorded sites (41BX14, 41BX63, and 41BX979). There are no previous archaeological surveys listed in the Atlas database within a one mile radius of the project area.

Site 41BX14, 1.2 kilometers to the southwest, is described as an "extensive work shop" and was documented in 1972. No other information is available regarding this site.

Site 41BX63, located 1.3 kilometers to the northeast, is a prehistoric site recorded in 1971 in an open pasture. There is no additional information available regarding this site.

Site 41BX979, 1.5 kilometers east, has no available information on the Atlas database.

ARCHAEOLOGICAL FIELD SURVEY

On December 2, 2008 an intensive pedestrian and subsurface archaeological survey was conducted by SWCA archaeologists at the proposed 50-acre Vantage at Kitty Hawk development.

The 100 percent pedestrian survey was focused on identifying any surficial artifacts or features. The area was generally found to be an open agricultural setting with stands of mesquite, live oak, and cedar, typical of an upland setting. The remnants of two stock tanks were noted in the center and eastern edge of the project area. Both tanks were constructed with high berms derived from the surrounding soils, suggesting significant subsurface disturbance to the project area.

In addition, twenty-four shovel tests were excavated throughout the project area in order to assess the possibility of unidentified subsurface cultural materials (Figure 3, Table 1). Excavated soils throughout the project area were dark brown to light brown clay loam with gravel inclusions. Soils become more compact and clay content increased with depth. All twenty-four were negative for cultural material. No cultural materials were observed across the entire 50 acres.

SUMMARY AND RECOMMENDATIONS

On behalf of AOH-Kitty Hawk, LLC, SWCA conducted an intensive archaeological survey of the proposed 50-acre Vantage at Kitty Hawk development in northeastern San Antonio, Bexar County, Texas.

Cultural resource investigations were conducted in compliance the City of San Antonio Historic Preservation and Design Section of the Unified Development Code (Article 6 35-630 to 35-634).

Archaeologists from SWCA conducted an intensive pedestrian and shovel testing survey of the entire 50-acre project area. A total of twenty-four shovel tests were excavated throughout the entire project area, all were negative for cultural materials. Soils throughout the entire 50-acre project area were found to range from light to dark brown gravely compact clay.

Based upon the results of current investigations, there are no cultural resources within the project area. As a result, there are no resources considered eligible for listing in the NRHP under Criterion D or as a SAL under 13 TAC 26.12. No cultural resources will be adversely affected by the proposed Vantage at Kitty Hawk development.

No further work is recommended for the entire 50-acre Vantage at Kitty Hawk development.

Figure 3. Backhoe trench location map.

Table 1. Shovel Test Data

Shovel Test #	Depth (cmbs)	Soil Color	Soil Texture Description	Inclusions	Comments
1	0-5	Dark Brown	Clay	Gravels	Test was located in tall grasses. The soil was extremely compact and dry clay. The test was terminated due to basal clay and compact soil. No cultural material was encountered.
2	0-5	Dark Brown	Clay	None	Test was located in open field grasses on the edge of Kitty Hawk Road 30m from the drainage. The test was terminated due to basal clay. No cultural material was encountered.
	5-30	Light Brown & Tan	Clay	None	Clay content increased and the soil became more compact with depth. Test was terminated due to basal clay. No cultural material was encountered.
3	0-15	Dark Brown	Clay	Gravels, Land Snail Shells	Test was located near a small, natural in short and tall grasses. The soil was less compact but still dry clay with heavy gravels and land snail shells. The test was terminated due to basal clay and rocky soil. No cultural material was encountered.
4	0-10	Dark Brown	Clay Loam	Gravels	Test was located at the edge of the drainage in mixed grasses, mesquite trees, and light shrubs. The test was terminated due to gravels. No cultural material was encountered.
5	0-10	Light Brown	Clay Loam	Gravels	Test was located in mixed grasses. Soil was dry, compact clay with gravel inclusions. The test was termianted due to basal clay and compact soil. No cultural material was observed.
6	0-30	Dark Brown	Clay	None	Test was located west of the drainage in mixed grasses and mesquite trees. Test was termianted due to rocky soil. No cultural material was encountered.
7	0-5	Dark Brown	Clay	Gravels	Test was located in mixed grasses near a modern trash and push pile. Soil was extremely compact and rocky. The test was terminated due to compact and rocky soil. No cultural material was encountered.
8	0-30	Dark Brown	Clay	Gravels	Test was located in an open field with mixed grasses and was terminated due to compact and rocky soil. No cultural material was encountered.
9	0-10	Light Brown	Clay	Gravels	Test was located in mixed grasses and yucca. The soil was extremely compact with few gravels. The test was terminated due to compact soil. No cultural material was encountered.
10	0-30	Dark Brown	Clay	Gravels	Test was located in an open field in mixed grasses. The test wast termianted due to basal clay and rocky soil. No cultural material was encountered.
11	0-10	Very Light Brown	Clay	Gravels	The test was located in tall grasses. The soil was very compact with heavy gravel inclusions. The test was terminated due to compact and rocky soil. No cultural material was encountered.
12	0-30	Dark Brown	Clay	None	Test was located in an open field on the east side of stock tank 1. It was terminated due to basal clay. No cultural material was encountered.
13	0-20	Light Brown	Clay Loam	Gravel, Land Snail Shells, Caliche at Depth	Test soil was dry and blocky with gravels and land snail shells, and became more compact with depth. Caliche was encountered at depth. Caliche and compact soil were the reasons for termination. No cultural material was encountered.
14	0-30	Dark Brown	Clay	Gravels	Test was located along drainage that ran along eastern boundary in mixed grasses and trees. Test was terminated due to rocky soil. No cultural material was encountered.

Table 1. Shovel Test Data

Shovel Test #	Depth (cmbs)	Soil Color	Soil Texture Description	Inclusions	Comments
15	0-5	Light Brown	Clay	Gravels	Test was located in mixed grasses and scrub oaks. The soil was extremely compact and dry clay with few gravel inclusions. Test was terminated due to compact soil. No cultural material was encountered.
16	0-30	Dark Brown	Clay	Gravels	Test was located near stock tank 2 in mixed grasses and mesquite trees. The test was terminated due to basal clay. No cultural material was encountered.
17	0-10	Dark Brown	Clay Loam	Roots	Test was located in a stand of oaks with short grasses. Soil was not as compact. Terminated due to roots. No cultural material was encountered.
18	0-30	Dark Brown	Clay	None	Test was located in mixed grasses and mesquite trees. It was terminated due to basal clay. No cultural material was encountered.
19	0-10	Dark Brown	Clay	None	Test was located in mixed grasses. The soil was very compact. The test was terminated due to compact soil. No cultural material was encountered.
20	0-30	Light Brown	Silty Clay	None	Test was located in the central area of the APE in mixed grasses. It was terminated due to basal clay. No cultural material was encountered.
21	0-20	Light Grayish Brown	Clay Loam	None	The test was located in tall grasses. It was in loose, blocky soil that became more compact with depth. The test was terminated due to compact soil. No cultural material was encountered.
22	0-30	Light Brown	Silty Clay	None	Test was located in the central area of the APE in mixed grasses. It was terminated due to basal clay. No cultural material was encountered.
23	0-25	Light Grayish Brown	Clay Loam	None	The test was located in tall grasses and scrub trees, 15m east of the overhead transmission line ROW. It was in loose, blocky soil that became more compact with depth. The test was terminated due to compact soil. No cultural material was encountered.
24	0-30	Light Brown	Silty Clay	None	Test was located in the central area of the APE in mixed grasses. It was terminated due to basal clay. No cultural material was encountered.

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