Contract Publication Series 15-443

A NEGATIVE FINDINGS CULTURAL RESOURCE SURVEY OF A 93 ACRE TRACT AT THE SHREVEPORT REGIONAL AIRPORT IN CADDO PARISH, LOUISIANA

by
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Prepared for

Shreveport Airport Authority

Prepared by

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CRA Project No.: L15C003

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November 18, 2015

ABSTRACT

Cultural Resource Analysts, Inc., personnel completed a records review and cultural resource survey of a 37.6 ha (93.0 acre) parcel at Shreveport Regional Airport in Caddo Parish, Louisiana. This work was conducted at the request of the City of Shreveport to comply with the National Historic Preservation Act and obtain cultural resource clearance for state site certification of the project area. The records review for the project was conducted on November 6, 2015, and the fieldwork was conducted on November 9 and 10, 2015. The project parcel is located on the east side of Shreveport Regional Airport, approximately 10.7 km (6.7 mi) southwest of downtown Shreveport, Louisiana, and 14.8 km (9.2 mi) east of the town of Greenwood, Louisiana.

The purpose of this work was to locate, describe, and evaluate any archaeological materials or historic structures in the project area and provide recommendations for future management of cultural resources. This report includes a summary of all previous archaeological work conducted in the project area and includes a summary of archaeological and historic information that has been documented for each cultural resource.

The records review consisted of a search of online files maintained by the Louisiana Office of Cultural Development, Division of Archaeology, an examination of historic maps, and a review of historic structures listed in the Louisiana Historic Resources Inventory to identify any cultural resources or cultural resource investigations previously documented in the area. The records review indicated that six previous cultural resource investigations and two archaeological sites (16CD88–16CD89) had been documented within a 1.6 km (1.0 mi) radius of the project area. No standing structures were recorded within or directly adjacent to the project area. One of the previous surveys included the current project area, but that work was not conducted in accordance with the current Louisiana Office of Cultural Development, Division of Archaeology guidelines and as a result the area was re-surveyed.

The field investigation consisted of an intensive pedestrian survey supplemented with screened shovel tests excavated in areas where excavation was physically possible. Shovel tests were dug at 50 m (164 ft) intervals. The entire project area was also visually inspected for cultural material during the shovel test survey. A total of 157 shovel tests were excavated on 12 transects. All shovel tests were negative for cultural material. No structures, structural remains, or other features older than 50 years were encountered within the project area during fieldwork.

Based on the findings of the records review and cultural resource survey, no archaeological sites or historic properties listed in, or recommended eligible for listing in, the National Register of Historic Places will be affected by construction activities. The area is considered cleared from a cultural resources perspective, and no additional management action is recommended.

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I. INTRODUCTION

During the period extending from November 6 to 10, 2015, Cultural Resources Analysts, Inc. (CRA), personnel completed a cultural resource file search and phase I archaeological survey of a property at Shreveport Regional Airport in Caddo Parish, Louisiana (Figure 1). The project area consisted of a single tract measuring approximately 37.6 ha (93.0 acres) in area and was located on the west side of Shreveport Regional Airport to the southwest of downtown Shreveport, Louisiana (Figure 2). This survey was conducted at the request of the City of Shreveport. The cultural resource file search, utilizing online files maintained by the Louisiana Office of Cultural Development Division of Archaeology/State Historic Preservation Office (SHPO), was conducted on November 6, 2015, and the fieldwork for the project was conducted on November 9 and 10, 2015.

Purpose of Study

The purpose of this cultural resource survey was to locate, describe, evaluate, and to make appropriate recommendations for the future treatment of any historic or prehistoric archaeological properties that may be affected by the development of the project area. All associated field notes, records, and site photographs will be curated at the Louisiana Office of Cultural Development, Division of Archaeology.

Figure 1. Map showing the location of Caddo Parish in the state of Louisiana.

All work associated with this investigation was conducted pursuant to standards set forth by the Louisiana Office of Cultural Development, Division of Archaeology (SHPO), to comply with the National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR 800). *Louisiana's Comprehensive Archaeological Plan* (LCAP) was referred to for guidance during this investigation (Smith et al. 1983).

Project Description

The project area is located on the east side of Shreveport Regional Airport, southwest of downtown Shreveport and east of the town of Greenwood, in central Caddo Parish, Louisiana (Figure 2). The parcel is bound on the northeast by an aircraft taxi strip and an arbitrary boundary; on the northwest by an arbitrary boundary; on the southwest by an arbitrary boundary adjacent to Challenger Drive; and on the southeast by an arbitrary boundary. Measuring roughly 37.6 ha (93.0 acres) in area, the project area occupies portions of Sections 20 and 21 of Township 17N, Range 14W. The survey parcel was suitable for shovel testing and is covered with grasses and isolated trees.

Summary of Findings

A records review using data available from the SHPO was conducted to identify any cultural resources or cultural resource investigations previously documented in the area. The review consisted of a search of online files maintained by the Louisiana Office of Cultural Development, Division of Archaeology, an examination of historic maps, and a review of historic structures listed in the Louisiana Historic Resources Inventory. The records review indicated that six previous cultural resource investigations and two previously recorded archaeological sites (16CD88–16CD89) had been documented within a 1.6 km (1.0 mi) radius of the project area. One of the previous surveys included the current project area, but that work was not conducted in accordance with the current SHPO guidelines and as a result the area was re-surveyed. In addition, the review of historic maps indicated that no structures had

previously been depicted within the project area on historic United States Geological Survey (USGS) topographic quadrangles.

The field investigation consisted of a pedestrian survey of the entire project area along with the excavation of shovel tests. Shovel tests were dug on a 50 m (164 ft) grid (Figure 3). Over the course of the project, 157 shovel tests were excavated on 12 transects. All of the shovel tests were negative for cultural material. No historic structures, structural remains, or other features older than 50 years were encountered within the project area during fieldwork.

Based on the findings of the records review and cultural resource survey, no archaeological sites or historic properties listed in, or recommended eligible for listing in, the NRHP will be affected by development activities in the project area. The area is considered cleared from a cultural resources perspective, and no additional management action is recommended.

Report Organization

This report is organized into six numbered Sections. Section I provides an overview of the project and summarizes the results of the archaeological investigation. Section II is an overview of the environmental setting of the project area. The results of the records review are detailed in Section III. Section IV contains the methodological approach of the archaeological investigation. The results of the cultural resource survey are presented in Section V, and CRA's conclusions and recommendations regarding future work in the project area are presented in Section VI.

Project Personnel

Jason Kennedy served as the field director for the project and oversaw daily operations. Field crew members included Gilson Killhour. Paul Bundy served as Principal Investigator, and the report preparation was carried out by Jason Kennedy. The final report production was completed by the CRA CAD and publications departments. All documentation produced during fieldwork will be curated at the CRA office in Shreveport, Louisiana.

II. ENVIRONMENTAL SETTING

This section of the report provides a description of the modern environment and considers those aspects of the physical environment that may have influenced the location and methods for finding archaeological sites. The discussion of the modern environment specifically provides information regarding the physiography, soils, vegetation, and climate.

Physiography

The project area is located in central Caddo Parish in northwest Louisiana. Caddo Parish covers an area of 244,236 ha (603,520 acres), of which 11,422 ha (28,224 acres) are occupied by reservoirs, lakes, streams, and other waterways (Edwards et al. 1980). The project area's elevation is 72–81 m (236–265 ft) above mean sea level (AMSL), generally sloping downward from northeast to southwest.

The survey area is situated within the Tertiary Uplands of the South Central Plains "ecoregion", a term used by Daigle et al. (2006) to refer to geographic areas similar in environmental characteristics, vegetation, soils, and biotic and abiotic resources. The South Central Plains occupy portions of Louisiana, Oklahoma, east Texas, and Arkansas. The topography of the South Central Plains is typified by rolling plains interspersed with sandy low hills, bottomlands, and flat fluvial terraces. The Tertiary Uplands within this ecoregion are dissected by multiple small intermittent streams and are primarily composed of silts, sands, and clays of Eocene age, with some deposits of Paleocene sediments being found in the western portions of the unit (Daigle et al. 2006).

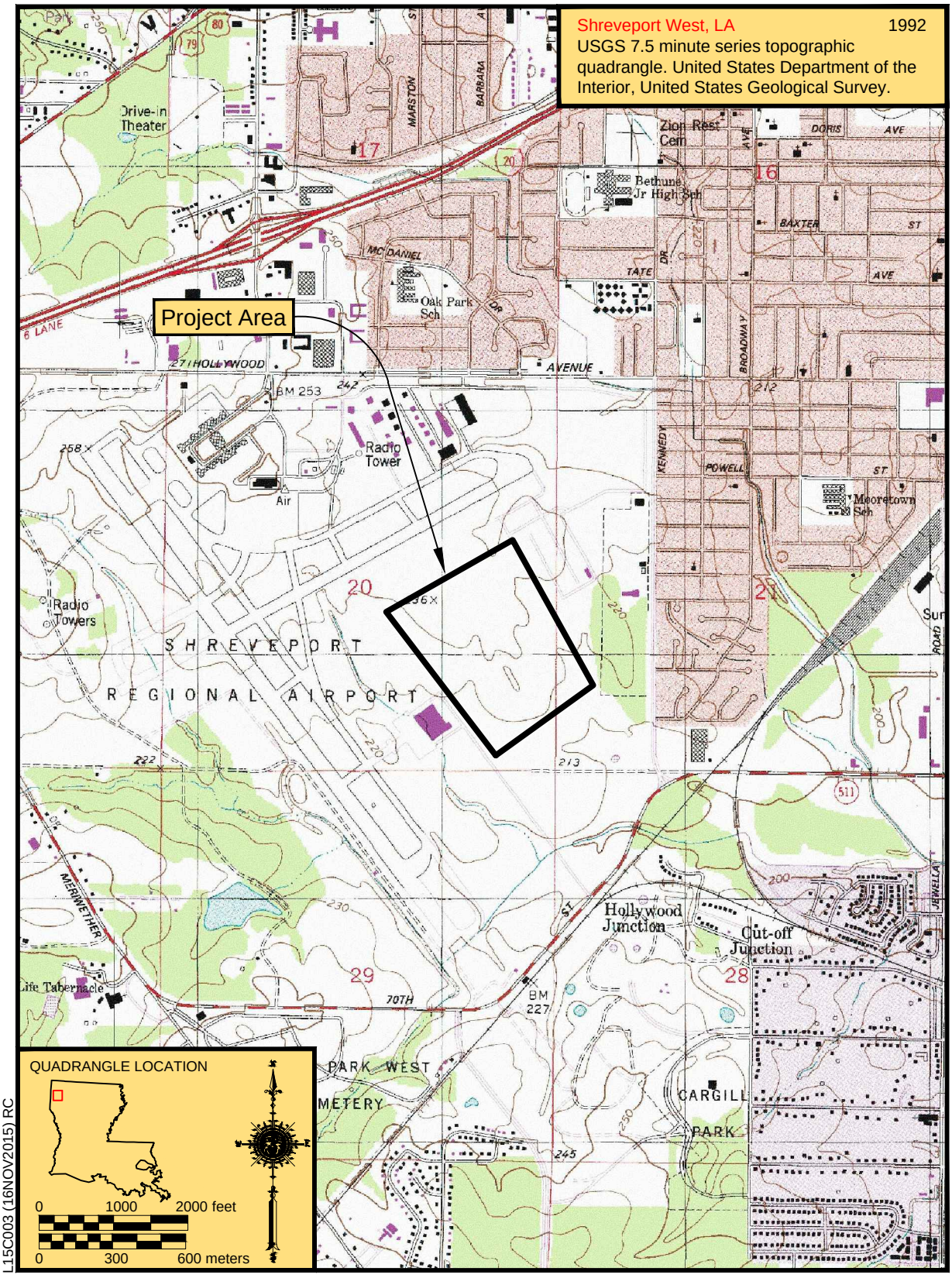

Figure 2. Topographic map showing the location of the project area.

Figure 3. Aerial view showing the location of the project area, transects, Shreveport Regional Airport infrastructure, and local vegetation conditions.

Soils

According to the Soil Survey of Caddo Parish, Louisiana, and the online Web Soil Survey maintained by the United States Department of Agriculture (USDA), the project area is mapped as containing soils from two different series. The vast majority of the north and center portion of the project area contain Keithville very fine sandy loams, while a smaller portion of the survey area's southern boundary is mapped as containing a Metcalf-Timpson soil complex, which is typical of low-lying areas (Edwards et al. 1980; USDA 2015).

Keithville very fine sandy loams are the dominant soils found in the project area, present in much of the area's eastern half and a portion of its northwest quadrant. This soil is gently sloping, moderately well drained, and experiences medium surface runoff. Keithville soils typically form on ridgetops or drainage divides found in uplands. A typical Keithville pedon consists of an A1 horizon of brown (10YR 4/3) very fine sandy loam from 0 to 8 cm (0 to 3 in) below ground surface (bgs); an A2 horizon of yellowish brown (10YR 5/4) very fine sandy loam from 8 to 23 cm (3 to 9 in) bgs; and a B21t horizon of yellowish red (5YR 5/8) loam subsoil from 23 to 41 cm (9 to 16 in) bgs (Edwards et al. 1980; USDA 2015).

Metcalf silt loams are present in a complex interspersed with Timpson soils in the low-lying lands in the project area's west half. This soil is gently sloping, somewhat poorly drained, and experiences slow runoff. Metcalf soils commonly form on broad level or nearly level marine or stream terraces. A typical Metcalf pedon consists of an A1 horizon of dark grayish brown (10YR 4/2) silt loam from 0 to 8 cm (0 to 3 in) bgs; an E horizon of light yellowish brown (10YR 6/4) silt loam from 8 to 20 cm (3 to 8 in) bgs; and a Bt1 horizon of yellowish brown (10YR 5/6) loam subsoil from 20 to 41 cm (8 to 16 in) bgs (Edwards et al. 1980; USDA 2015).

Timpson silt loams are mapped as part of the same Metcalf-Timpson soil complex in the low-lying portions of the west half of the project area. This soil is nearly level, moderately well drained, and experiences slow to medium runoff. Timpson soils form in alluvial sediments on Pleistocene-age terraces. A typical Timpson pedon consists of an A horizon of dark grayish brown (10YR 4/2) silt loam from 0 to 18 cm (0 to 7 in) bgs; an E horizon of yellowish brown (10YR 5/4) very fine sandy loam from 18 to 36 cm (7 to 14 in) bgs; a BE horizon of strong brown (7.5YR 5/6) very fine sandy loam from 36 to 53 cm (14 to 21 in) bgs; and a Bt1 horizon of strong brown (7.5YR 5/8) loam subsoil from 53 to 71 cm (21 to 28 in) bgs (Edwards et al. 1980; USDA 2015).

Shovel tests excavated in the majority of the project area displayed intact profiles that generally corresponded with the soil series mapped in their respective locations. The observed disturbance in sections of the northeastern portion of the project area is likely the result of construction activities associated with Shreveport Regional Airport infrastructure.

Vegetation

The Tertiary Uplands were historically vegetated with shortleaf pine and hardwood forest. Much of the native woodland has since been lost, and undeveloped areas of the Tertiary Uplands are presently typically vegetated with commercial pine plantations or pastureland. The land is primarily utilized for timber production, with poultry production, livestock grazing, and oil and gas activities representing secondary land uses. Within Caddo Parish, typical agricultural crops in these areas include cotton and soybeans (Daigle et al. 2006; Edwards et al. 1980).

At the time of the survey, the majority of the project area was covered by open fields vegetated with tall grass. Isolated deciduous trees were present on the northeast edge of the project area (see Figure 3). Several large areas within the project area contained shallow standing water especially south of a shallow slope in the middle of the project area.

Modern Climate

Caddo Parish has a humid, subtropical climate heavily influenced by a fluctuating frontal boundary that is alternately dominated by warm and moist tropical air from the Gulf of Mexico and colder continental air from the north. Incursions of the cold continental air occur frequently during winter and spring, while the warm Gulf of Mexico air dominates during summer and autumn.

Daytime high temperatures average 34 degrees C (93 degrees F) in the summer months and 15 degrees C (59 degrees F) in the winter months. Daily low temperatures average 22 degrees C (72 degrees F) in the summer months and 4 degrees C (39 degrees F) in the winter months. Temperatures occasionally exceed 38 degrees C (100 degrees F) from June to September, and the warm summer pattern typically persists from April through October. Between October and March temperatures have been known to drop below freezing, but these periods are typically brief. Though snowfall is generally rare, snowfalls of short duration occasionally take place. The annual mean rainfall in the parish totals 114 cm (45 in), of which 56 cm (22 in) typically falls from April through September and 58 cm (23 in) falls from October through March (Edwards et al. 1980).

Description of the Project Area

The project area is a rectangular polygon on the east side of Shreveport Regional Airport, approximately 10.7 km (6.7 mi) southwest of downtown Shreveport, Louisiana, and 14.8 km (9.2 mi) east of the town of Greenwood, Louisiana. The parcel is bound on the northeast by an aircraft taxi strip and an arbitrary boundary; on the northwest by an arbitrary boundary; on the southwest by an arbitrary boundary adjacent to Challenger Drive; and on the southeast by an arbitrary boundary (see Figures 2 and 3). The polygon encompassing the project area measures approximately 740 m (2,428 ft) from north to south and 595 m (1,952 ft) from east to west at its greatest extent, and covers 37.6 ha (93.0 acres).

Located in Section 20 and 21 of Township 17N, Range 14W, the project area is depicted on the Shreveport West, Louisiana, 7.5-minute USGS topographic quadrangle (USGS 1992). Elevations in the project area vary by roughly 9 m (29 ft), from approximately 65 m (212 ft) AMSL near the southern boundary to 72 m (236 ft) AMSL at the northern boundary. The topography of the project area slopes generally downward from northeast to southwest.

At the time of the survey, the project area was covered by open fields and was suitable for shovel testing. As discussed above, vegetation in the vast majority of the project area consisted of tall grasses, with isolated deciduous trees being present on the southeast boundary. The gentle slope to the south was the most visibly prominent topographic feature within the project area. These elevated areas appeared to represent the natural contours of the land, (Figure 5). A chain-link fence separated the undeveloped portions of the project area from the surrounding areas.

Surface visibility was generally minimal throughout the shovel tested portions of the project area due to grass coverage. However, many of the elevated areas in the north had moderate to good surface visibility, though subsoil was generally present at or near the surface in these locations. With the exception of the truncated or absent upper soil horizons observed in shovel tests excavated in the northeastern portion of the project area, shovel tests excavated in the majority of the project area displayed intact profiles that generally corresponded with the soil series mapped in their respective locations. The weather during the survey was mostly sunny and provided excellent field conditions.

Figure 4. Project Area Facing North from Southern Edge. Airport facilities observed are outside project area.

Figure 5. Project Area Facing North from Transect 10 STP 9, showing two large Shreveport Regional Airport hangers just outside of the project area.

III. PREVIOUS RESEARCH AND CULTURAL OVERVIEW

On November 6, 2015, a search of online files maintained by the Louisiana Office of Cultural Development Division of Archaeology (SHPO) was conducted to: 1) determine if the project area had been previously surveyed for archaeological resources; 2) identify any previously recorded archaeological sites that were situated within the project area; 3) provide information concerning what archaeological resources could be expected within the project area; and 4) provide a context for interpreting any cultural resources identified within the project area. The examination of SHPO data consisted of a review of professional survey reports and records of archaeological sites for an area encompassing a 1.6 km (1.0 mi) radius of the project area. The review of professional survey reports and archaeological site data in the area can provide basic information on the types of archaeological resources that are likely to occur within a project area and the landforms that are most likely to contain these resources. In addition to the examination of site data, a review of available historic maps and the Louisiana Historic Resources Inventory was conducted to identify any mapped historic structures in the vicinity of the project area and aid in locating potential historic sites. The results of the records review are discussed below.

Previously Documented Cultural Resource Surveys and Archaeological Sites

The SHPO maintains an online database containing professional survey reports and archaeological site data for the entire state of Louisiana. Examination of this data indicated that six prior archaeological surveys and two archaeological sites (16CD88–16CD89) were documented within a 1.6 km (1.0 mi) radius of the project area. One of the previously recorded surveys overlapped the entire area of the current project (Figure 6). These prior archaeological surveys and sites as well as information about standing structures recorded on historic maps are described below.

Survey of Airport Park (Report #22-0008): SHPO Report 22-0008 documents the results of an archaeological survey of approximately 12 ha (30 acres) encompassing a proposed park adjacent to the Shreveport Regional Airport. The survey was conducted in 1976 by Clarence H. Webb. The project consisted of a pedestrian survey supplemented with periodic examination of exposed soils. No cultural resources were identified during this survey (Webb 1976)

Shreveport Regional Airport Survey (Report #22-0353): SHPO Report 22-0353 documents the results of an archaeological survey of approximately 688 ha (1,700 acres) encompassing Shreveport Regional Airport. The survey was conducted in November and December of 1977 by Jon L. Gibson, Steven J. Brazda, and Rain Barnes for the Shreveport Airport Authority and HTB of Louisiana, Inc. The 1977 project consisted of a pedestrian survey supplemented with periodic shovel tests. The survey tract defining the 1977 work encompassed the entire current project area, but the methodology of the fieldwork did not conform to the current SHPO standards. A total of five cultural loci were recorded during the 1977 project, three of which received trinomials and were officially designated as archaeological sites (16CD88–16CD90) Only two of these sites are within the 1.6 km (1.0 mi) radius of the project area (Gibson 1977).

Site 16CD88 consisted of two prehistoric lithic flakes found roughly 12 m (40 ft) apart. Neither of these artifacts was diagnostic, and the site was recommended not eligible for listing in the NRHP. Site 16CD89 consisted in 1977 of one partial Bassett projectile point and one lithic flake found on the surface of a ridge roughly 6 m (20 ft) apart. No subsurface artifacts were found, and the site was recommended not eligible for listing in the NRHP (Gibson 1977). Both Site 16CD88 and

Shreveport West, LA 1992
USGS 7.5 minute series topographic quadrangle. United States Department of the Interior, United States Geological Survey.

16CD89

16CD88

QUADRANGLE LOCATION

0 1000 2000 feet

0 300 600 meters

LEGEND

1-Mile Buffer
CRA Report #15-244
Previously Recorded Archaeological Site
Project Area Boundary
Survey 22-0008
Survey 22-0353
Survey 22-0517
Survey 22-1701
Survey 22-3593

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Figure 6. Topographic map showing the locations of previously recorded archaeological sites and surveys within a 1.6 km (1.0 mi) radius of the project area.

Site 16CD89 are located well outside the current survey area and will not be impacted by any development activities in the project area.

I-220 Corridor Survey (Report #22-0517): This report describes the results of a pedestrian and shovel test survey of a proposed alignment of Interstate 220 in the vicinity of Cross Lake in west Shreveport. This investigation was performed in the summer of 1977 for Howard, Needles, Tammen and Bergendoff by the Research Institute, College of Pure and Applied Sciences of Northeast Louisiana University. The 1977 project corridor measured approximately 122 m (400 ft) in width and 24 km (15 mi) in length. No cultural resources were identified during this survey, and the surveyed areas passed no closer than roughly 730 m (2,395 ft) northwest of the current project area (Price and Heartfield 1977).

Northwestern State University Regional Archaeology Program Management Unit 1 Survey (Report #22-1701): SHPO Report 22-1701 documents the results of archaeological surveys conducted by Northwestern State University during the 1991–1992 grant year under the auspices of the Regional Archaeology Program. These investigations involved the survey of multiple areas covering a combined total of approximately 162 ha (400 acres) in Management Unit 1, which encompassed 14 parishes in northwest Louisiana. A total of 42 new archaeological sites were recorded during these investigations and 6 previously recorded sites were revisited (Girard 1992). None of the surveyed areas examined during this project were located closer than approximately 630 m (2,067 ft) from the current project area, and none of the examined sites will be impacted by any development activities in the current project area.

Impact Assessment of the ETC Tiger Pipeline Expansion (Report #22-3593): SHPO Report 22-3593 documents the results of archaeological surveys conducted by TRC in 2009 for ETC Tiger Pipeline, LLC. These investigations involved the survey of multiple areas, including 33.0 km (20.5 mi) of pipeline, three existing compressor stations and seven contractor yards, in northwest Louisiana. Only one contractor yard mentioned above is within 1.6 km (1.0 mi) of the current project area. Field methods consisted of pedestrian survey supplemented by shovel testing. No structures, structural remains, or other features older than 50 years were encountered within the project area during fieldwork (Stanyard 2015).

Survey of 55 Acre Tract at Shreveport Regional Airport (Report # not yet listed): This report (CRA Report # 15-244) documents the results of an archaeological survey conducted by Cultural Resources Analysts, Inc., of a 22.3 ha (55.0 acres) parcel at Shreveport Regional Airport in Caddo Parish, Louisiana. The fieldwork was conducted on June 19 and 20, 2015. The project parcel is located on the west side of Shreveport Regional Airport. The field investigation consisted of an intensive pedestrian survey supplemented with screened shovel tests excavated in areas where excavation was physically possible. Shovel tests were dug at 30 m (98 ft) or 50 m (164 ft) intervals, depending on project conditions. No structures, structural remains, or other features older than 50 years were encountered within the project area during fieldwork (Bilgri 2015).

Historic Map and Louisiana Historic Resources Inventory Data

Following the file search, a review of available historic maps and the Louisiana Historic Resources Inventory was conducted to help identify any historic structures that may be located within the project area. The Louisiana Historic Resources Inventory is an online database maintained by the SHPO containing information on historic standing structures listed in the NRHP in the state of Louisiana. The historic maps provide information on the dynamics of the cultural landscape in response to political and social changes, as well as technological innovations associated with agricultural industries. The review of the Louisiana Historic Resources Inventory indicated that no historic standing structures listed in the NRHP were present within a 1.6

km (1.0 mi) radius of the current project area.

The following USGS maps were reviewed:

1945 Greenwood, Louisiana, 15-minute series topographic quadrangle map (USGS 1945);

1955 Greenwood, Louisiana, 15-minute series topographic quadrangle map (USGS 1955a);

1955 Shreveport West, Louisiana, 7.5-minute series topographic quadrangle map (USGS 1955b);

1959 Shreveport West, Louisiana, 7.5-minute series topographic quadrangle map (USGS 1959);

1969 Greenwood, Louisiana, 15-minute series topographic quadrangle map (USGS 1969a);

1969 Shreveport West, Louisiana, 7.5-minute series topographic quadrangle map (USGS 1969b);

1975 Shreveport West, Louisiana, 7.5-minute series orthophotoquad (USGS 1975);

1980 Shreveport West, Louisiana, 7.5-minute series topographic quadrangle map (USGS 1980); and

1992 Shreveport West, Louisiana, 7.5-minute series topographic quadrangle map (USGS 1992).

All mapped structures on these quadrangles are well outside the project area and if associated structural elements should exist, they will not be impacted by any proposed construction activities.

Survey Predictions

In recent decades, many scholars have labored to develop predictive models to aid in the management and protection of cultural resources (e.g., Anderson et al. 1988, 1999; Anderson and Smith 2003; Campbell and Weed 1986; Hillman 1980; Johnson 1984a, 1984b; Johnson et al. 1986; Phillips and Willingham 1990; Servello 1983; Thomas et al. 1982; and Willingham and Phillips 1987). The factors that tend to be most commonly associated with prehistoric settlement are a close proximity to water and level ground. Historical draws to regions would have been the same as prehistoric, although through time there would have been increasing concern for suitability of land to certain prevailing industries, such as timber production or agriculture. Considering the soils data, information gleaned from historic maps, and the previously recorded archaeological sites surrounding the project area, certain predictions are possible regarding the presence of cultural resources within the project area.

The majority of the project area is covered with gentle southwest-facing slopes, with a few relatively flat areas also being present on ridgetops and in shallow bottoms. Despite the presence of a small intermittent stream traversing the south of the project area, the survey area does not incorporate any permanent water sources, with the nearest natural perennial water source being an unnamed tributary of Brush Bayou, roughly 2.1 km (1.3 mi) southeast. Most of the project area was therefore considered to have a low probability of containing cultural material. Accordingly, the project area was shovel tested at a low probability interval of 50 m (164 ft).

IV. METHODS

Field investigation consisted of an intensive pedestrian survey supplemented with screened shovel tests. The project area was considered to have a low probability of containing cultural materials due to its distance from perennial water sources and from previously recorded archaeological sites. Therefore, the project area was shovel tested at an interval of 50 m (164 ft) (see Figure 3).

Transects were each assigned a consecutive numerical designation, and the shovel tests were numbered consecutively along each transect. Transect beginning locations were marked with flagging tape that specified the unique transect. All shovel tests measured 30-x-30 cm (12-x-12 in) and were excavated to 50 cm (20 in) bgs or until sterile subsoil was encountered. In practice, sterile subsoil or fill soil was typically encountered between 10 and 40 cm (4 and 16 in) bgs. Fill removed from the tests was screened through .64 cm (.25 in) mesh hardware cloth or was trowel-sorted in instances where the soil was extremely clayey.

The sidewalls and bottoms of shovel tests were examined for cultural material and features. Along each transect the ground surface was visually inspected for artifacts. The locations of the individual transects are presented in Figure 3.

Soil profiles exposed in each excavated shovel test were recorded using standardized recording forms. Shovel test form entries included the unique designation for each transect shovel test along with shovel test status (positive or negative) and the depth, soil texture, and predominant color of each stratigraphic zone encountered (including disturbances).

Universal Transverse Mercator (UTM) coordinates were recorded with a GeoExplorer 3000 Series GeoXT handheld global positioning system (GPS) unit manufactured by Trimble to verify locations within the project area. Beginning of transect (BOT) locations were flagged and numbered for crew members. After transects were completed, the locations of each BOT and end of transect (EOT) were recorded as UTM positions using the GPS unit. The quality parameters of the GPS unit were adjusted to only collect data that would satisfy a 3 m (10 ft) level of accuracy. For all points collected, 20 incoming GPS positions were averaged. The GeoXT GPS units are capable of sub-meter accuracy after post-processing. Photographs were taken of general conditions within the project area. All photographs taken during the project were recorded on standardized photographic log sheets.

V. RESULTS

The fieldwork portion of this project consisted of a combination of pedestrian survey and shovel testing. The project area was vegetated with tall grasses at the time of the survey, with isolated deciduous trees being present on the northeast boundary. Surface visibility was generally minimal throughout the shovel tested portions of the project area due to grass coverage. However, along the northeastern portion of the project area, moderate to good surface visibility though subsoil was generally present at or near the surface in these locations.

All 157 shovel tests excavated on 12 transects in the project area were negative for cultural materials, and no surface artifacts were observed. No aboveground or subsurface features were encountered, and no soil strata that resembled cultural midden were revealed. No historic structures, structural remains, or other features older than 50 years were encountered within the project area during fieldwork.

Shovel tests excavated in the project area displayed intact profiles that generally corresponded with the soil series mapped in their respective locations. However, several tests excavated in the northeastern portion of the project area displayed significant disturbance. In general, disturbance in these areas consisted of truncated or absent upper soil horizons, often displaying subsoil at the surface. At the extreme southern edge of the project area, standing water and a high water table were evident. The observed disturbance in portions of the eastern half of the project area is likely the result of construction activities associated with Shreveport Regional Airport infrastructure.

VI. CONCLUSIONS AND RECOMMENDATIONS

Cultural Resource Analysts, Inc., personnel completed a file search on November 6, 2015, and fieldwork on November 9 and 10, 2015, for a 37.6 ha (93.0 acre) parcel at Shreveport Regional Airport in Caddo Parish, Louisiana. This work was conducted at the request of the City of Shreveport to comply with Section 106 of the NHPA, and to obtain cultural resource clearance for state site certification of the project area.

The records review consisted of a search of online professional survey reports and records of archaeological sites maintained by the SHPO, an examination of historic maps, and a review of historic structures listed in the Louisiana Historic Resources Inventory for an

area encompassing a 1.6 km (1.0 mi) radius of the project area. The records review indicated that six previous cultural resource investigations and two archaeological sites (16CD88–16CD89) had been documented within this radius. One of the previous surveys included all of the current project area, but was not conducted in accordance with the current SHPO guidelines and as a result the area was re-surveyed. No standing structures were recorded within or directly adjacent to the project area.

Pedestrian survey supplemented with 157 screened shovel tests excavated at 50 m (164 ft) intervals on 12 transects resulted in negative findings. All shovel tests were negative for cultural material. No structures, structural remains, or other features older than 50 years were encountered within the project area during fieldwork.

Based on the findings of the records review and the cultural resource survey, no archaeological sites or historic properties listed in, or recommended eligible for listing in, the NRHP will be affected by construction activities within the project area. The area is considered cleared from a cultural resources perspective, and no additional management action is recommended.

If any previously unrecorded archaeological materials are encountered during activities in the project area, the SHPO should be notified immediately. If human skeletal material is discovered, the construction activities should cease, local law enforcement and the SHPO should be notified immediately, and SHPO guidelines should be followed.

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