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TECHNICAL MEMORANDUM

To: Clif Chitwood
Mississippi County, Arkansas Economic Development
Submitted via email to: clif@cottontosteel.com

From: Nicole Inskeep, B.A. and Denise Magditch, M.S. Geo

Date: January 14, 2021

Re: **Cultural Resources Background Review for the Proposed Arkansas Aeroplex Environmental Study Project in Mississippi County, Arkansas / SWCA Project No. 67767**

INTRODUCTION

On behalf of the Mississippi County, Arkansas Economic Development organization, SWCA Environmental Consultants (SWCA) conducted a cultural resources background literature and records review for the proposed Arkansas Aeroplex Environmental Study Project (project). This project includes the assessment of a proposed industrial development area located north of Blytheville in Mississippi County, Arkansas. The project encompasses approximately 100 acres (40.4 hectares [ha]) of agricultural land/airport land within the historic Blytheville Air Force Base (AFB), located in the northern portion of the county. The installation's original name was Eaker AFB. The project area lies approximately 1.9 miles (3 kilometers [km]) south of the Missouri border, approximately 3 miles (4.8 km) northwest of Blytheville, Arkansas, and approximately 1.13 (1.8 km) miles northeast of Gosnell, Arkansas (Appendix A, Figure A1).

SWCA analyzed the potential for cultural resources within the 100-acre (40.4-ha) proposed project area, as well as a larger area that included a 1-mile buffer around the project area, to create an approximately 3,085.2-acre (1,248.5-ha) study area (Appendix A, Figure A2). The study area is mapped within the northwestern portions of the *Blytheville, Arkansas* U.S. Geological Survey (USGS) 7.5-minute quadrangles.

REGULATORY BACKGROUND

Projects in Arkansas typically come under the purview of the National Historic Preservation Act of 1966 (NHPA), as amended, which is administered by the lead federal agency appropriate to the project. Additionally, projects in the state should comply with the standards and guidelines of the Arkansas Historic Preservation Program (AHPP) and the Arkansas Archeological Society (AAS), including *Guidelines for Archeological Fieldwork and Report Writing in Arkansas*.¹

¹ Arkansas Historic Preservation Program (AHPP). 2020. Guidelines for Archeological Fieldwork and Report Writing in Arkansas. In the *Arkansas State Plan*, Appendix B. Revised in January 2020. Available at: https://archeology.uark.edu/wp-content/uploads/2019/03/Guidelines-for-Cultural-Resources-Fieldwork-Report-Writing-in-AR_StatePlanAppendices_B-and-C_March2019.pdf. Accessed January 2022.

If an undertaking is federally permitted, licensed, funded, or partially funded, the project must comply with Section 106 of the NHPA. Section 106 requires that every federal agency consider the undertaking’s effects on historic properties, defined as any property listed on, or eligible for listing on, the National Register of Historic Places (NRHP). The NRHP is a cultural resources inventory maintained by the Secretary of the Interior. This list includes buildings, structures, objects, sites, districts, and archaeological resources. As stipulated in NHPA Section 106 implementing regulations in 36 Code of Federal Regulations 800 (Protection of Historic Properties), compliance with the law includes the identification and evaluation of historic properties that could be impacted by the proposed project. Examples of projects in Texas requiring compliance with the NHPA include those conducted on federal land or those requiring a federal permit, such as a Clean Water Act (CWA) Section 404 permit (including nationwide permits) from the U.S. Army Corps of Engineers (USACE) regarding waters of the U.S. (WOTUS).

If WOTUS cannot be avoided by all phases of construction, USACE permitting under Section 404 of the CWA may trigger NHPA Section 106 compliance at potential jurisdictional waterways occurring in the project area. The USACE would then require a cultural resources survey be conducted prior to permitting.

GEOLOGY AND SOILS

The project is located within the Mississippi Embayment, approximately 12.4 miles (20 km) from the Mississippi River. This area is entirely underlain by Quaternary alluvium (Qso); this formation consists fluvial deposits of unconsolidated clay, silt, sand, and gravel (Appendix A, Figure A3).² The National Resources Conservation Service (NRCS) maps four soil units within the project area (Table 1) (Appendix A, Figure A4).³ All of these soils are very deep and formed in alluvial environments from recent deposits, which indicates a moderate to high probability for buried cultural materials. However, the project area is located within the heavily developed Arkansas International Airport property and is therefore previously disturbed.

Table 1. Soil Units Within the Project

Soil Unit	Major Soil Component	Landform	Description	Percentage of Project
Routon-Dundee-Crevasse complex	Routon	Stream terraces and upland depressions	Very deep soils that formed in silty alluvium derived from loess	81.4
Steele and Tunica soils	Steele	Undulating portions of floodplains	Very deep soils formed in sandy and clayey deposits, commonly in narrow bands paralleling overflow channels	16.3
Steele silty clay loam	Steele	Undulating portions of floodplains	Very deep soils formed in sandy and clayey deposits, commonly in narrow bands paralleling overflow channels	1.7
Amagon sandy loam	Amagon	Stream terraces	Very deep soils that formed in loamy alluvium	0.6

² U.S. Geological Survey (USGS). 2022a. Geologic Map Data. An online database of geologic unit data. U.S. Geological Survey. Reston, Virginia. Available at: <https://www.usgs.gov/maps/geologic-map-data>. Accessed January 2022.

³ Natural Resources Conservation Service. 2022. Soil Survey. Available at: <https://casoilresource.lawr.ucdavis.edu/>. Accessed January 2022.

METHODS

Background Review

SWCA performed a cultural resources records review on January 11, 2022, to identify those portions of the study area that have been previously surveyed for cultural resources and identify any cultural resources that have been recorded within the study area. To conduct this review, an SWCA archaeologist searched the Automated Management of Archeological Site Data in Arkansas (AMASDA), a restricted, online database maintained by the AAS, for any previously recorded surveys and historic or prehistoric archaeological sites located in or within 1 mile (1.6 km) of the project area.⁴ In addition to identifying previously recorded archaeological sites, SWCA performed a records and data search of the AHPP online database to determine if NRHP properties, cemeteries, or other cultural resources are located in or within 1 mile (1.6 km) of the project area.⁵ SWCA also reviewed records and historical maps maintained by the Arkansas Highway and Transportation Department and the General Land Office (GLO), as well as historical USGS topographic maps.^{6,7,8}

RESULTS

Cultural Resource Surveys

The background review revealed that three cultural resources survey have been conducted within the study area, all of which overlap the project area (Table 2).⁹ These surveys date between 1988 and 1994 and led to the identification of four sites (3MS0524, 3MS0525, 3MS0548, and 3MS0568) located within the study area. Survey 1393 was conducted between 1988–1989 to determine whether archaeological resources on the AFB would be adversely affected by the proposed Peacekeeper Rail Garrison Program. During this survey, eight sites were newly recorded, including 3MS0524 and 3MS0525, which are within the study area. Additionally, the Eaker Site (3MS0105), a prehistoric village, was tested for NRHP eligibility and was recommended eligible for listing.

Survey 1601 was conducted in 1991 by Mid-Continental Research Associates on 865 acres (350 ha) of undeveloped land on the AFB on behalf of Tetra Tech, Inc. This survey recorded 15 newly identified archaeological sites including 3MS0548, 3MS0561, and site 3MS0105 was revisited. All sites were recommended eligible for the NRHP and the investigator’s further recommended testing to support these nominations. An exception was site 3MS0105, which was already determined to be eligible for listing.¹⁰

Survey 2335 was conducted in 1994 by Mid-Continental Research Associates on behalf of the United States Air Force for shut-down procedures for the AFB, which was chosen for closure under the Base Realignment and Closure Act (BRAC) of 1990.^{11,12} The base is required to adhere to a National

⁴ Arkansas Archeological Survey. 2022. Automated Management of Archeological Site Data in Arkansas (AMASDA). Arkansas Archeological Survey. Available at: <http://archeology.uark.edu/amasdaonline/index.html>. Accessed January 2022.

⁵ AHPP, 2022.

⁶ Arkansas Highway and Transportation Department (AHTD). 2005. An online database of cultural features. Available at: <https://gis.arkansas.gov/product/all-cultural-feature-point/>. Accessed January 2022.

⁷ General Land Office (GLO). 2022. General Land Office Records. U.S. Department of the Interior. Bureau of Land Management. Available at: <https://gloreCORDS.blm.gov/default.aspx>. Accessed January 2022.

⁸ USGS. 2022b. TopoView: an online database of USGS topographic maps. U.S. Geological Survey. Reston, Virginia. Available at: <https://ngmdb.usgs.gov/topoview/>. Accessed January 2022.

⁹ AMASDA, 2022.

¹⁰ AMASDA, 2022.

¹¹ Public Law 101-510, Title XXIX.

¹² Lafferty III, Robert H. 1991. Final Historic Evaluation of 20 Archaeological Sites Eaker Air Force Base, Mississippi County, Arkansas.

Environmental Preservation Act (NEPA) assessment for base disposal and reuse for municipal purposes. During this assessment, 20 archaeological sites were evaluated for listing on the NRHP. The investigating archaeologists recommended creating the North Sawba – Pemiscot Bayou National Register District, an archaeological district that would include sites 3MS0105, 3MS0524, 3MS0525, 3MS0549, 3MS0550, 3MS0551, 3MS0552, 3MS0553, 3MS0555, 3MS0556, 3MS0557, 3MS0560, and 3MS0561 (the North Sawba Cemetery [mistakenly labeled the Chickasawba Cemetery]), and the New Hope Church of the Episcopal Church South; however, this district is not currently listed on the NRHP.¹³ See Tables 2 and 3 for details regarding the surveys and the current NRHP status of the aforementioned sites.

Table 2. Previously Conducted Archaeological Surveys Within the Study Area

Project Number	Year	Project Type	Location	Report Title	Lead Author	Affiliation
1393	1988-1989	Phase I	Overlap project area	Cultural Resources Investigations Peacekeeper Rail Garrison Program, Eaker AFB, Mississippi County, Arkansas (Lafferty, 1989)	Lafferty III, Robert H.	Private
1601	1991	Phase I	Overlap project area	Archaeological Survey of Undeveloped Portions of Eaker AFB, Mississippi County, Arkansas (Cande and Lafferty 1991).	Cande, Robert F. and Robert H. Lafferty III	Private
2335	1994	Phase I	Overlap project area	Final Historic Evaluation of 20 Archaeological Sites Eaker AFB, Mississippi County, Arkansas (Lafferty 1994)	Lafferty III, Robert H.	Private

Source: AMASDA (2022).

Previously Recorded Archaeological Sites

The background review identified eight previously recorded archaeological sites within the study area, none of which are located within the proposed project area (Table 3) (Appendix A, Figure A5). These sites were recorded between 1972 and 2021 and consist of both prehistoric and historic-age sites.¹⁴ Of the eight sites identified, four are currently listed on the NRHP (3MS0105, 3MS0524, 3MS0525, and 3MS0561). Site 3MS0105 is also listed as a National Historic Landmark (NHL).

Site 3MS0105, also referred to as the Eaker Site, is a 75-acre (30.3-ha) multicomponent resource that includes Woodland, Mississippian, and historic components, with the largest component being the remains of a village dating to the Mississippian period. The site form indicates that middens, burials, and extant historical structures were observed at the time of investigation. Numerous artifacts were recorded, including ceramics, human and faunal remains, shell, building materials, glass, and lithics (Nodena points), the last of which provided the Mississippian temporal affiliation. Heavy disturbance from agricultural and construction activities related to the AFB were also noted.

During the 1994 BRAC evaluation of the AFB, Mid-Continental Research Associates recommended that 13 sites should be listed on the NRHP, including 3MS0524, 3MS0525, and 3MS0561, which are within the study area. According to the Memorandum of Agreement (MOA) reached between the United States Air Force, the State Historic Preservation Office, and the City of Blytheville, Arkansas, these sites were listed as eligible on the NRHP under the recommendations of Robert H. Lafferty.^{15,16}

¹³ AHPP, 2022.

¹⁴ AMASDA, 2022.

¹⁵ AMASDA, 2022.

¹⁶ Lafferty III, 1994.

In addition to the archaeological sites, one NRHP district, the Blytheville AFB Capehart Housing Historic District, and one cemetery, the North Sawba Cemetery, were identified within the study area. The location of these resources is illustrated in Appendix A, Figure A5. See Table 3 for additional details regarding the sites identified within the proposed study area.

Table 3. Previously Recorded Archaeological Sites Within the Study Area

Site Name	Distance to Project Area	Time Period	Site Type/ Notes	NRHP Eligibility
3MS0105	Within 1-mile buffer	Prehistoric: Mississippian, Nodena Phase, Baytown Period, Protohistoric 1400-1650 "towns",	Occupation/ Homestead and family cemetery	Listed/NHL May contain burials
3MS0195	Within 1-mile buffer	Unknown Historic	Potential homestead/ranch	Undetermined
3MS0524	Within 1-mile buffer	Prehistoric: Late Woodland Phase; Historic: twentieth century	Large artifact scatter	Listed
3MS0525	Within 1-mile buffer	Prehistoric: Late Woodland Phase	Artifact scatter	Listed
3MS0548	Within 1-mile buffer	Prehistoric: Mississippian	Artifact scatter	Undetermined
3MS0561	Within 1-mile buffer	Prehistoric: Big Lake Phase, Mississippian, Woodland Period, Dunklin Phase	Artifact Scatter	Listed
3MS0914	Within 1-mile buffer	Historic: twentieth century	Cemetery	Undetermined May contain burials
3MS0965	Within 1-mile buffer	Historic	Cemetery	Undetermined May contain burials

Source: AMASDA (2022), Memorandum of Agreement, Historic Properties, Eaker AFB, Arkansas (1997).

Bold entries are noteworthy.

Cemeteries

North Sawba Cemetery is located along the southeastern periphery of the proposed study area and does not intersect with the project area. The cemetery contains approximately 1,250 interments with burial dates ranging between 1874 to 1979; however, most of the interments have unknown birth and death dates. This cemetery is listed on the NRHP.^{17,18}

Historical Structures

The review of historical topographic maps, the AHTD maps, and GLO plat maps identified 917 potential historical structures (PHSs) within 1.0 mile of the project area (Appendix A, Figure A6).^{19,20} The majority of these structures are located within the Blytheville AFB Capehart Housing Historic District and the surrounding areas. The remaining historic structures are associated with the town of Blytheville and do not intersect with the project area; however, three PHSs were identified within the project area. The two

¹⁷ Find a Grave. 2022. FindaGrave Online database available at: <https://www.findagrave.com/cemetery/55406/north-sawba-cemetery#>. Accessed January 2022.

¹⁸ AMASDA, 2022.

¹⁹ GLO, 2022.

²⁰ USGS, 2022b.

PHSs located on the southern portion of the project area are extant and appear to be related to airport infrastructure, along with the runway that bisects the southern portion of the project. The function of the PHS located on the northern edge of the project area is unclear, although it may have been a residential dwelling as late as the 1950s. There is no building in this location today.

The PHSs within 1.0 mile of the project include various churches, housing structures (i.e., apartment buildings, motels, camping/lodging sites, and trailer parks), cemeteries, and an airport (likely referring to Blytheville AFB), all of which are located within the study area.²¹ The features located within the project area are likely similar structures to those identified within the study area and are associated with the development of Blytheville. It should be noted that because historic-age structures may have been heavily modified or removed completely from their original context, archaeological deposits may remain wherever historical structures formerly stood.

Eaker AFB / Blytheville AFB Capehart Housing Historic District

Eaker AFB opened in 1942 and acted as a pilot training field from 1942 to 1947. The base housed the AT-9, AT-70, and BT-13 fighter planes and conducted the associated pilot training until 1947, when the base was closed and reused by the city of Blytheville for fuel storage, a municipal landfill, and manufacturing. In 1955, Eaker AFB was reactivated as a bomber training facility and trained pilots on the use of the B-57 bomber, B-52G bomber, KC-97 refueler, KC-135 tanker, T-33 fighter jet, and the T-37 fighter jet. However, in 1991, Eaker AFB was chosen for closure under BRAC. The installation officially closed in December of 1992.²²

The Blytheville AFB Capehart Housing Historic District consists of the historic base housing area. The district is roughly bound by Village Avenue on the west, Cypress Drive on the south, Hemlock, Westminster, Apricot, and Azelea and Pigeon Streets to the east and Northside to the north. This District includes 433 buildings used for domestic dwellings and defense air facilities, and is a significant example of military family housing constructed between 1957 and 1962 as part of the Capehart Housing Program. The architecture includes ranch style housing, which was considered best for the region when considering climate and landscape constraints.²³

SUMMARY AND RECOMMENDATIONS

The cultural resources background review indicates that three cultural resources surveys have been performed in the study area, all of which overlap the project area. These surveys have resulted in the identification of eight archaeological sites within the study area, although none are located in the proposed project area. Notably, four of these sites are listed on the NRHP. Along with the NRHP-listed North Sawba Cemetery and the NRHP-listed Blytheville AFB Capehart Housing Historic District, SWCA's review indicates that there is a rich and relatively well-documented history within the project region. Additionally, three PHSs are located within the project area. Two of these are extant and appear to be related to airport infrastructure, while one may have been a dwelling that has been demolished. Since historical structures may have been heavily modified or removed completely from their original context, archaeological deposits may remain wherever historical structures formerly stood.

Based on the information provided to SWCA, it is anticipated that the entire 100-acre (40.4-ha) project area is entirely on land owned by Mississippi County. Currently, the project does not include a federal nexus that would trigger NHPA Section 106 compliance. If CWA Section 404 or other regulatory factors trigger NHPA Section 106 compliance, cultural resources surveys may be required in those specific

²¹ AMASDA, 2022

²² United States Air Force. 2022. Air Force Civil Engineer Center website available at: <https://www.afcec.af.mil/Home/BRAC/Eaker.aspx>. Accessed January 2022.

²³ AMASDA, 2022.

jurisdictional areas. The extent to which proposed project activities, such the construction of access roads and collection lines, would result in impacts to WOTUS is unknown at this time. If discharges of fill material to WOTUS are expected to occur as part of the project, state or federal regulatory triggers could also require further cultural resources investigations in proximity to those waterbodies.

Any cultural resources surveys conducted within the project area would be strictly for due diligence purposes. These investigations should be of sufficient intensity to determine the nature, extent, and, if possible, potential significance of any cultural resources located within areas of proposed impacts within the project area. Given the results of this background review, there is a moderate to high probability that the project area will contain archaeological sites. The extent of disturbance within the project area, however, suggests that any sites located here may lack integrity and thus would not be eligible for the NRHP. There is also a high potential to record historic architecture in the project area, specifically the two airport-related buildings and possibly the runway, all located in the southern portion of the project area. Avoidance of these structures may not be necessary if additional investigation is performed, and the resources are determined to be ineligible for listing on the NRHP.

APPENDIX A

Figures

Cultural Resources Background Review for the
Proposed Arkansas Aeroplex Environmental Study Project in Mississippi County, Arkansas

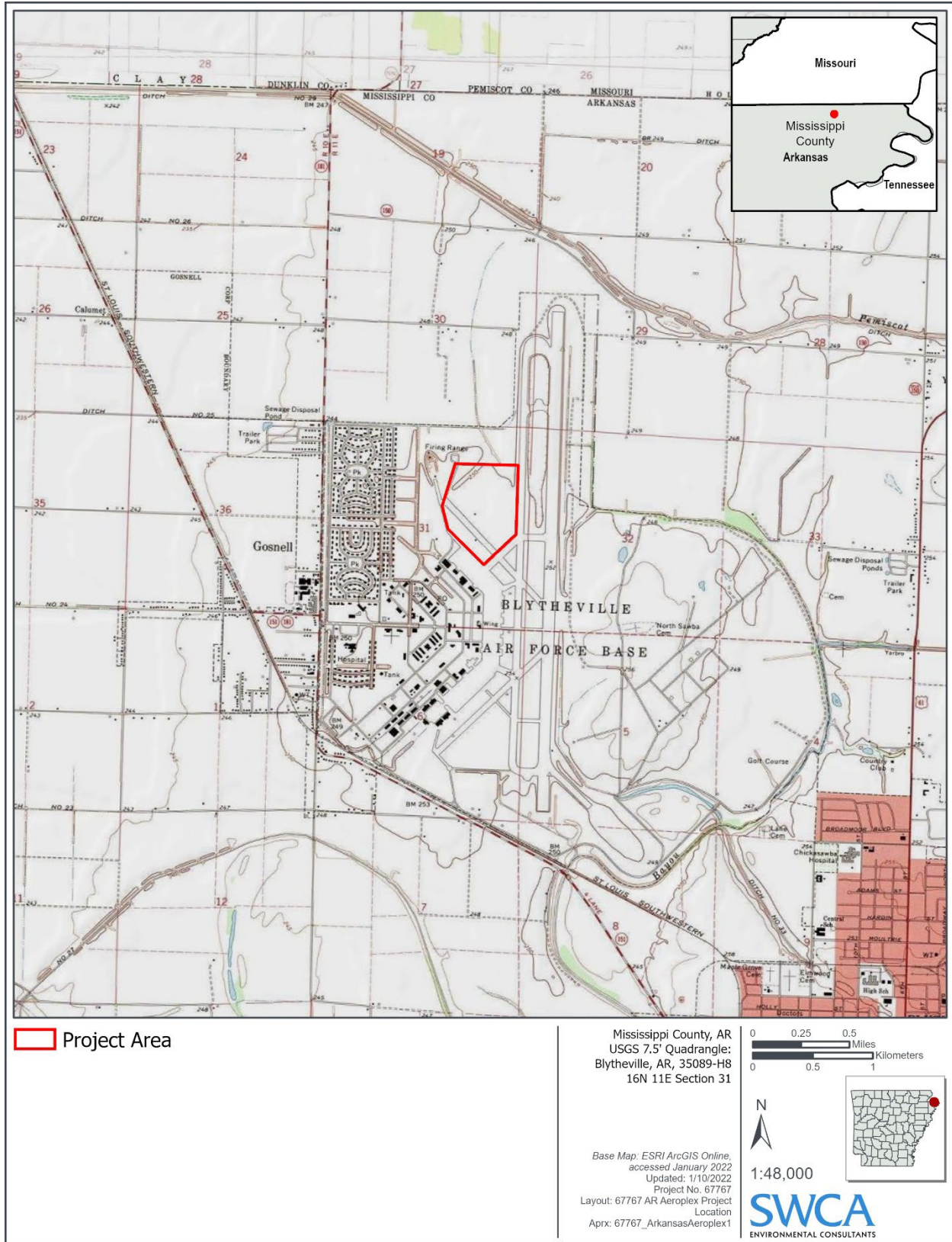


Figure A1. Project area location map.



Figure A2. Project area map.

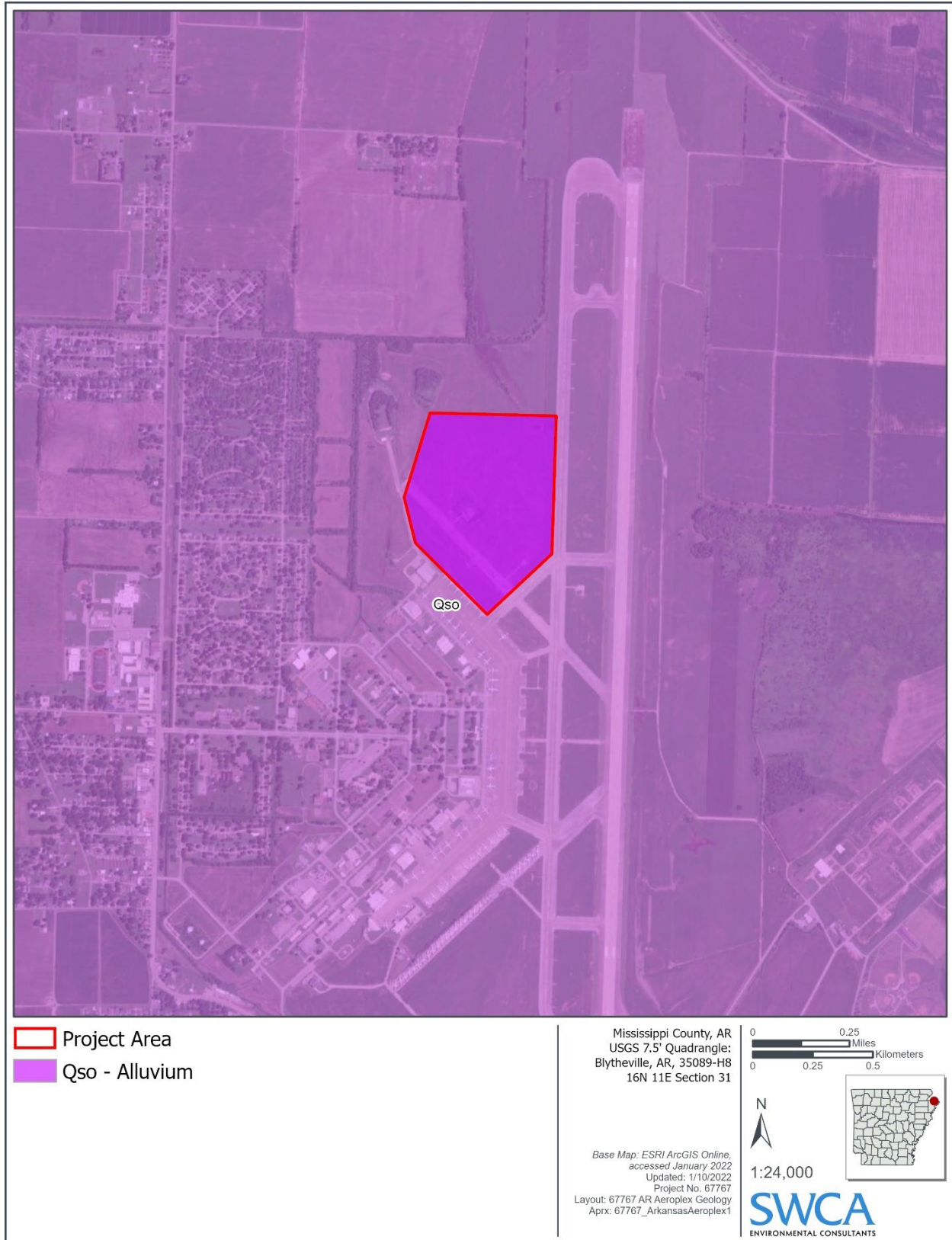


Figure A3. Geology within the project area.

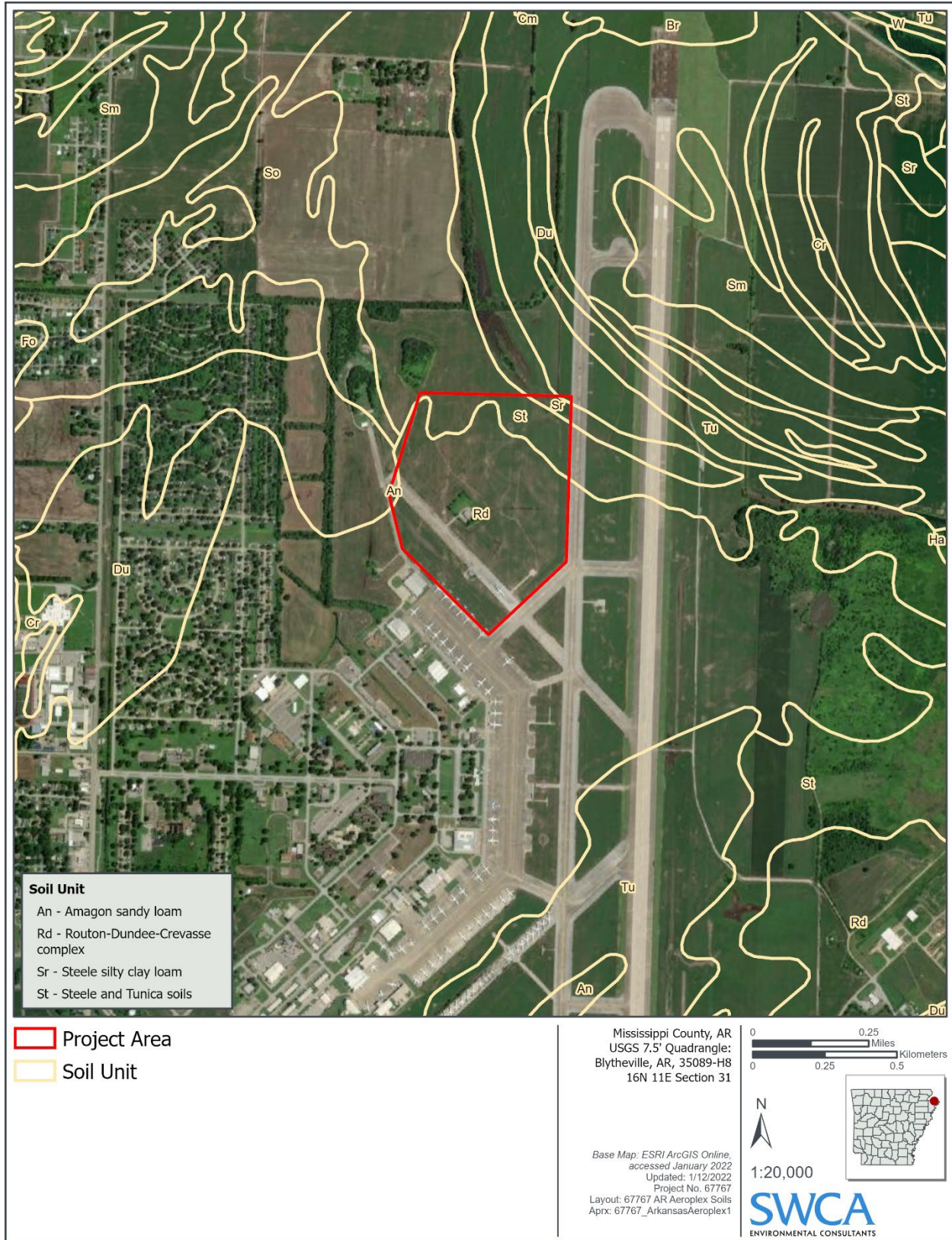


Figure A4. Soils within the project area.

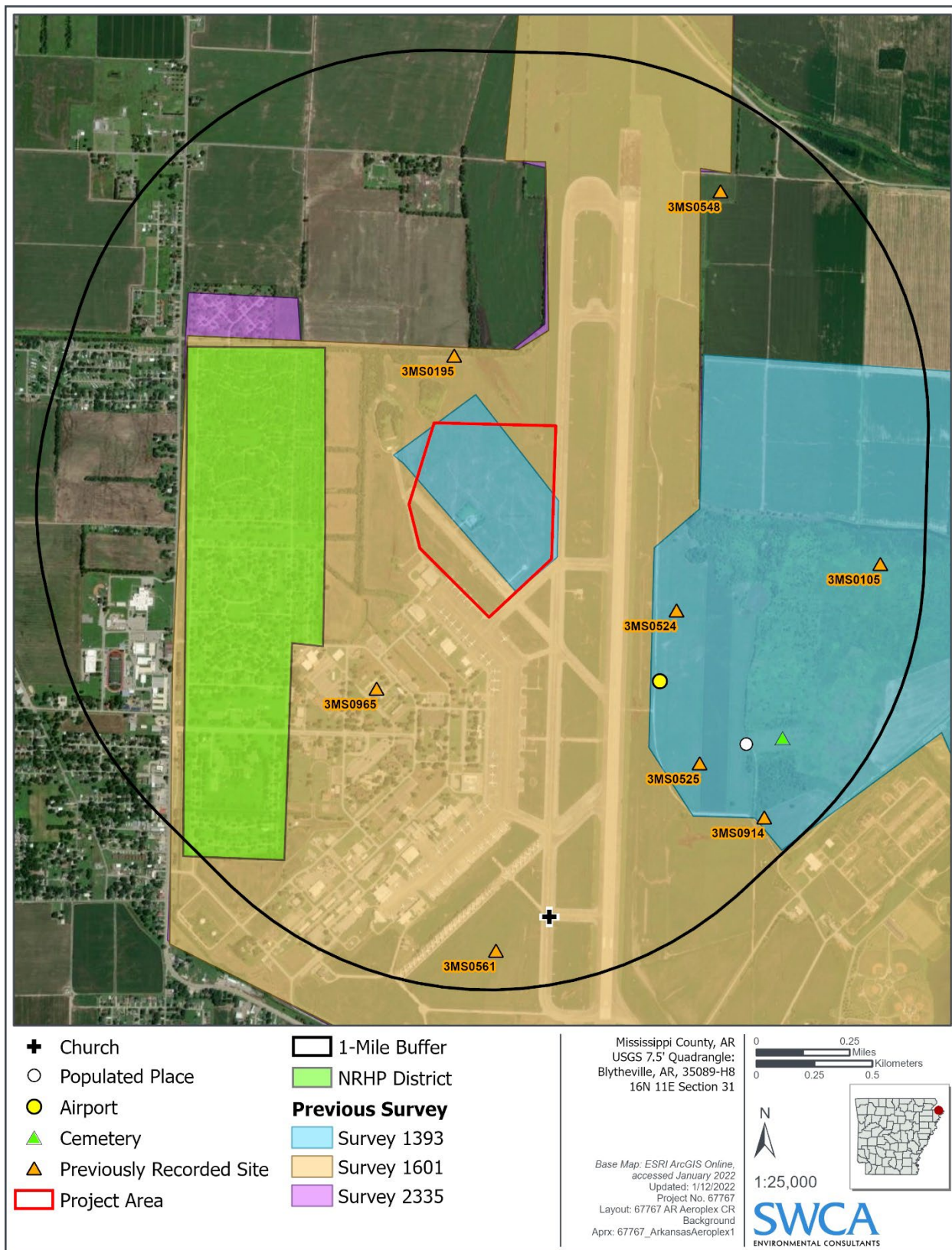


Figure A5. Background review map of the project area and study area.

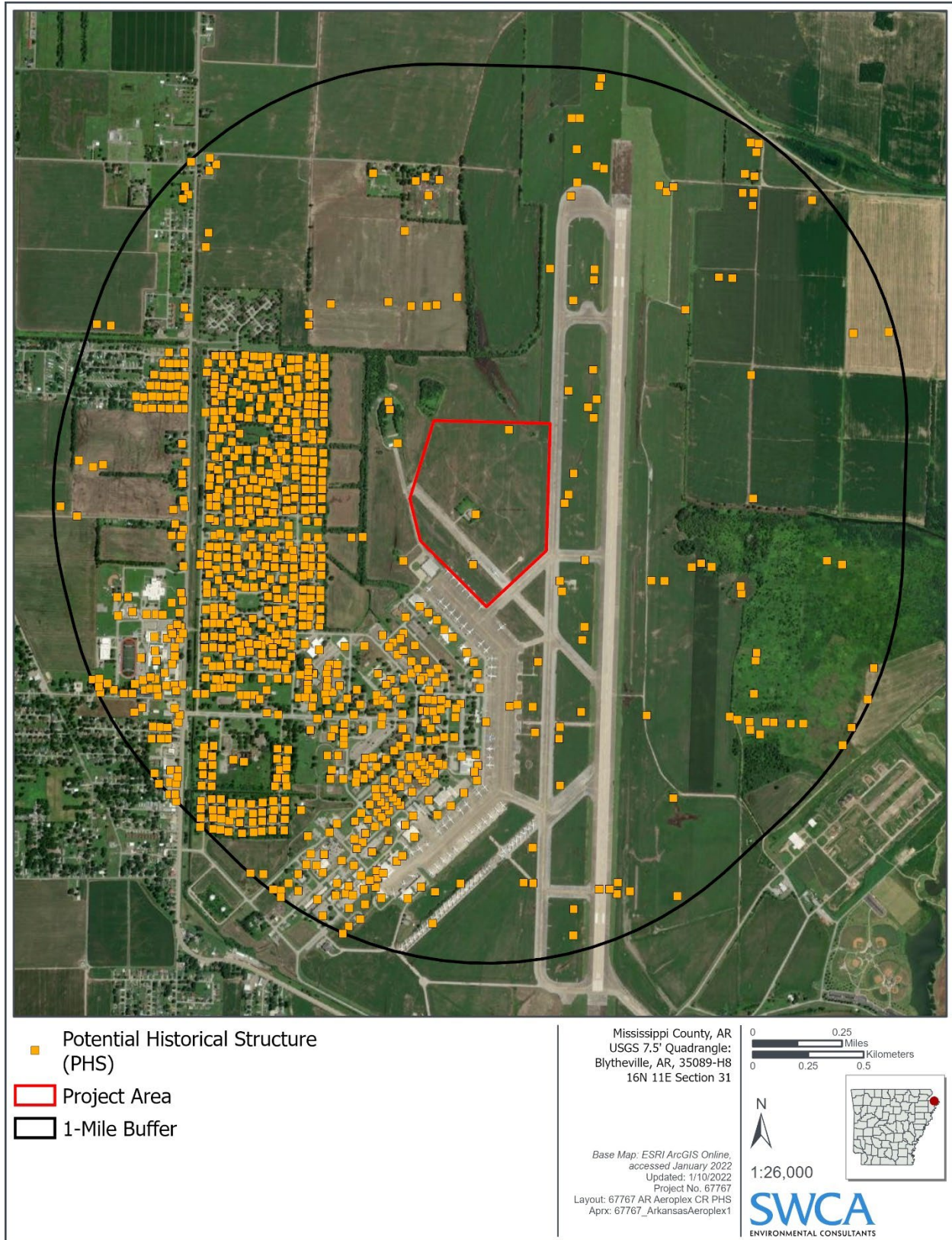


Figure A6. Potential historical structures located within the project and study areas.