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Chicora Foundation, Inc.

Memo

To: Mr. John Mazzarella, Ms. Linda Sarro

From: Michael Trinkley

CC:

Date: April 6, 2020

Re: Archaeological reconnaissance proposed new Donmar Sand Mine, Berkeley County, South Carolina

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Project Title: Archaeological Reconnaissance, Donmar Sand Mine Expansion, Berkeley County, SC

Agency Requiring Work: SCSHPO and Division of Mining & Solid Waste Management, DHEC

Agency Project Nos: SHPO Project No. 20-KL0073; DHEC Permit I-002198

Project Location: The project is situated in the southeast quadrant of Berkeley County, on the Cainhoy USGS topographic map, west of SC 41 and south of Charity Church Road (S-99), 6.2 miles south of the community of Huger, South Carolina (see Figures 1 and 2).

Personnel and Date of Survey: This reconnaissance was conducted by Dr. Michael Trinkley on Thursday, April 2, 2020.

Project Goals and Objective: The SCSHPO, in their letter dated March 24, 2020 to DHEC, requested that Donmar Sand Mines, LLC conduct an archaeological study, although the goals are somewhat unclear. The letter specifically states that a "reconnaissance survey" be conducted, because "the area is immediately adjacent to known sites." The letter further specifies that the purpose is to "identify cultural and historic sites, particularly archaeological sites, and evaluate their eligibility for listing in the National Register of Historic Places" (letter from Ms. Keely Lewis-Schroer, SHPO to Ms. Haley Smarr, DHEC, dated March 24, 2020). However, reconnaissance level studies do not gather the information necessary to address questions of eligibility.

Therefore, a reconnaissance level investigation was conducted not so much to determine eligibility as to examine the nature of the proposed pit extension: the soils and their drainage; how previous land use might have affected any archaeological sites present; and the probability, based on elevation, topography, soils, and land use, of archaeological sites. Should archaeological sites be identified during this investigation, sufficient data would be collected to permit the completion of a SCIAA Site Form and the nature of the site or sites would be used to make recommendations for the need of additional investigations.

The SHPO "DHEC-Mining Survey and Reporting Requirements" specify an area of potential impacts (APE) of 0.5 mile be used for the investigation. Thus, the study would also examine any standing architectural sites, publically accessible. ArchSite would be used to determine the presence and nature of the "immediately adjacent . . . sites" mentioned by the SCSHPO letter.

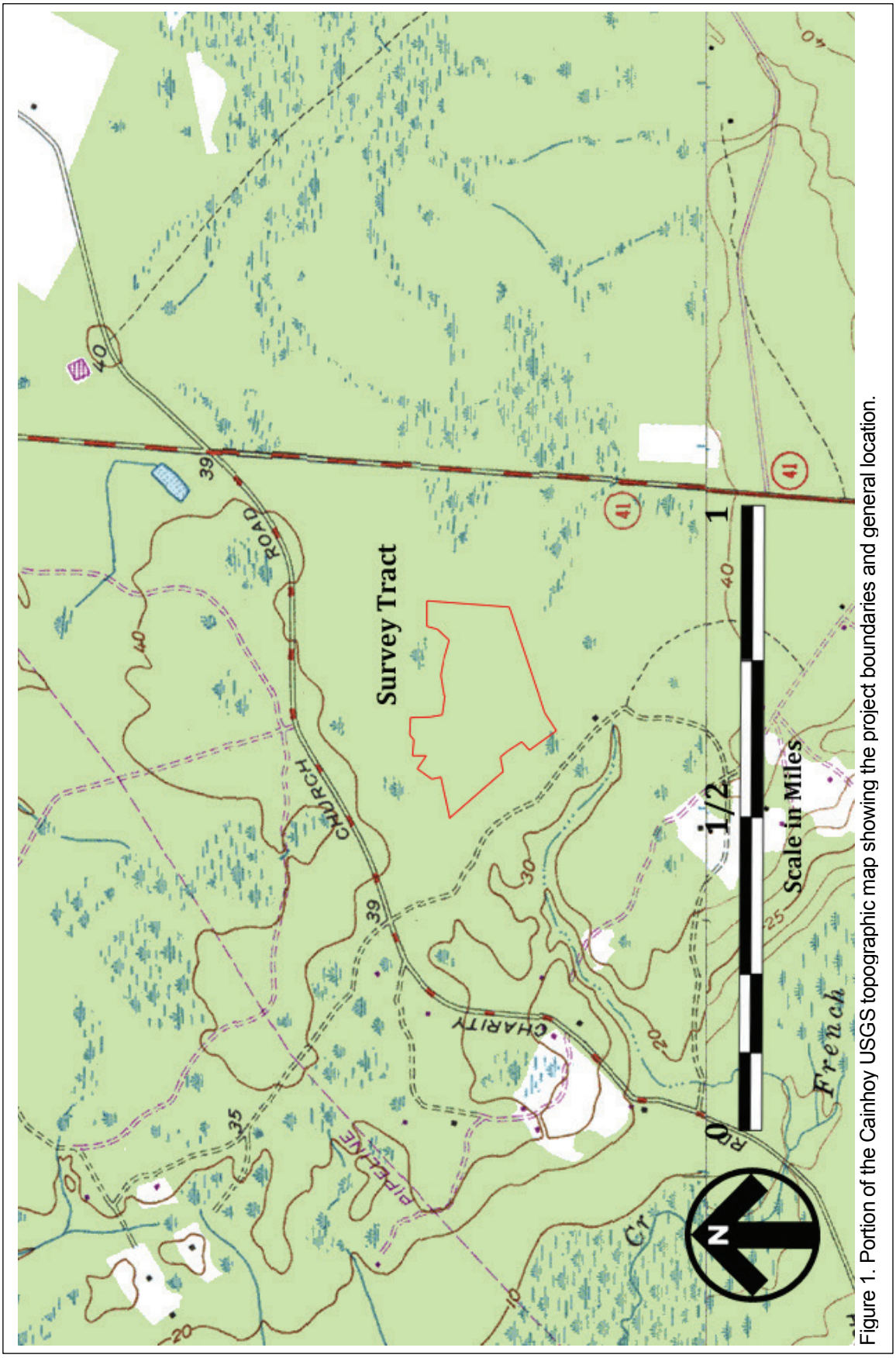
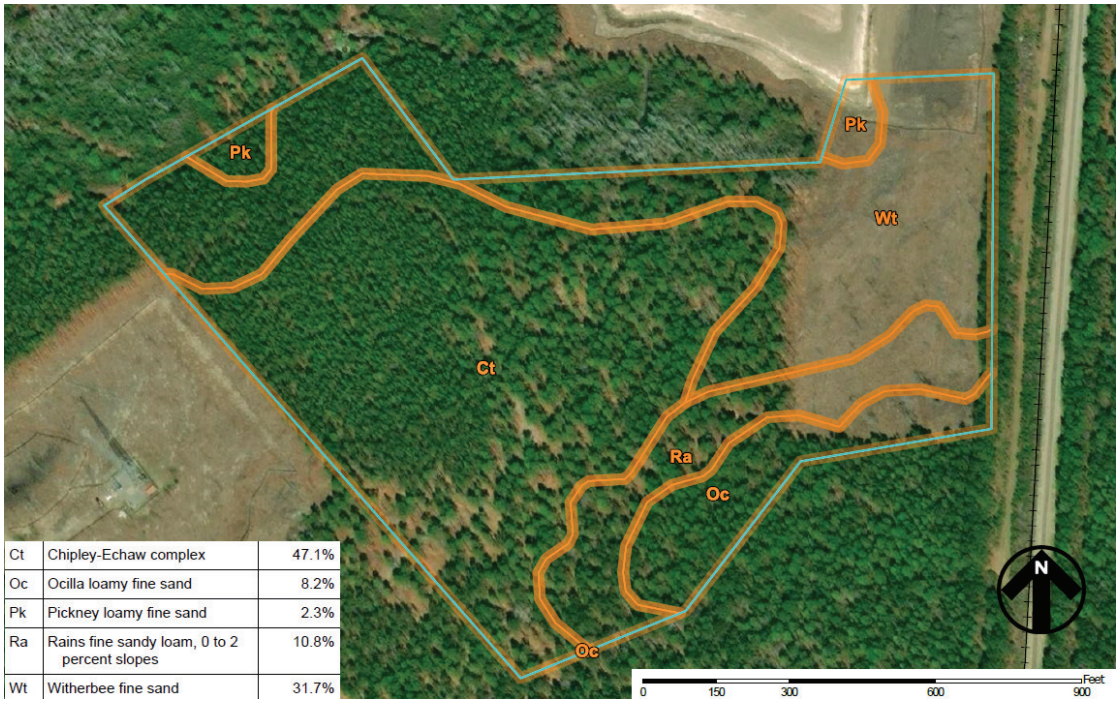


Figure 1. Portion of the Cainhoy USGS topographic map showing the project boundaries and general location.

Figure 2. Aerial showing project location.

Environmental Setting: The project is located on the Coastal Plain in an area dominated by second growth pines. Elevations tend to be less than 40 feet AMSL and the topographic map reveals interspersed areas of low swamp (Figure 1). Figure 2 reveals that the pit borders a swampy run immediately to the north. Two areas of the "ridge" overlooking this slough have been previously mined. Neither area has reported the finding of any archaeological remains.

Five soils are associated with the proposed pit (Figure 3). The Chipley-Echaw complex occurs on broad areas adjacent to low, wet areas. The soils have a high water table, with flooding during the winter and spring months. The Ocilla series soils are somewhat poorly drained, with an Ap horizon of dark grayish brown (10YR4/2) fine sandy loam about 0.7 foot, overlying an A horizon of pale to very pale brown (10YR6/3 to 10YR7/3) up to 2.0 feet in depth. This rests on a B horizon of yellowish brown (10YR5/6) sandy loam. The Pinckney soils are very poorly drained, often exhibiting an organic surface to 0.2 foot in depth, below which is a black (N2/0) loamy fine sand to a depth of 2.0 feet. The Rains soils are also poorly drained, also exhibiting a surface of black fine sandy loam. The Witherbee soils are somewhat poorly drained, with an A horizon of dark gray (10YR4/1) fine sand to 2 feet, over a B horizon of dark reddish brown (5YR2/2) sand (Long 1980). In general terms, none of these soils are especially suitable to the recovery of archaeological sites. And, in spite of the swampy nature of the soils, there is no flowing water source.



Ct	Chipley-Echaw complex	47.1%
Oc	Ocilla loamy fine sand	8.2%
Pk	Pickney loamy fine sand	2.3%
Ra	Rains fine sandy loam, 0 to 2 percent slopes	10.8%
Wt	Witherbee fine sand	31.7%

Figure 3. Soils in the project area.

At the time of the survey, the area proposed pit had been logged. Most timber had been removed, although there were several piles of mixed soil and timber, as well as several areas where debris had been burned. An access track was present and ditches had been established to promote drainage. Consequently, at the time of this investigation, the survey area no longer resembled even its most recent historic condition (Figures 4-6).

Previous Research: Figure 7 shows the ArchSite map of the project. There are no known sites within the survey tract and the nearest previously recorded site is 38BK1275, nearly 0.5 mile to the southeast. This is a Late Archaic and Early Woodland site recorded in 1991. It is described as "a small, low artifact density site that has been impacted by salvage logging activities and earlier highway construction and early

Figure 4. General views showing project location. Upper photo shows the access road and ditching. Lower photo shows the clear cutting and general ground condition.

Figure 5. Ground visibility. Upper photo shows the 100% visibility along the entire periphery, marked by silt fence. Lower photo shows broom straw and open ground areas where logged.

Figure 6. Open ground and soil/debris piles.

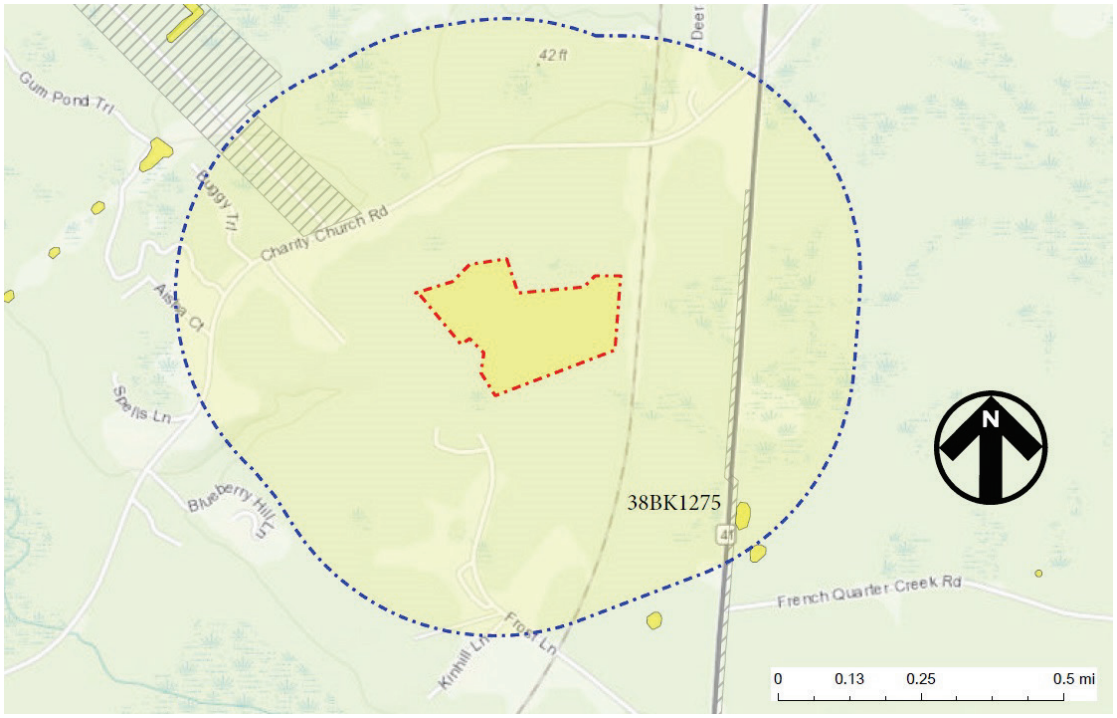


Figure 7. ArchSite map showing 0.5 mile APE surrounding the project tract.

fill borrow activities" (Williams et al. 1992:71). It was recommended not eligible. In addition to that survey (the bounds of which are not shown on ArchSite, there are two additional surveys in the APE. One was conducted in 2018 by Brockington and Associates and dealt with the realignment of a portion of SC 41; the other is a 2008 survey by Bland and Associates of a pole farm. Neither survey produced any archaeological sites in the APE.

Figure 8 shows aerials of the study area from 1999 and 2019. Although they don't reflect a great deal of time depth, they do indicate that the property has seen several episodes of logging and with each episode it is almost certain that additional ground disturbance has occurred.

Figure provides some cartographic background, including the 1825 Mills' *Atlas* of the area and the 1951 General Highway and Transportation Map showing historic development in the area. This map shows virtually no development along Charity Church Road to the northeast, with most of the development to the southwest, about a mile from the project development and focused on the African American community of Charity that grew up along S-98 (Clements Ferry Road). The project area is also immediately adjacent to the Francis Marion National Forest and little of that property was used for more than timber in the late nineteenth and early twentieth centuries.

None of this background suggests an especially significant likelihood of recovering intact archaeological sites in the project.

Field Methods: Prior to arrival at the project tract, when we anticipated the area would be wooded, we were hoping to be able to place shovel tests in areas with a range of drainage conditions. However, we discovered that site access was actually good, with soil visibility ranging from excellent to fair. As a result, we decided to conduct a pedestrian survey of those areas with excellent to good surface visibility and to conduct shovel testing in several areas in order to evaluate the possibility of below grade remains.

The first phase was walking the silt fence and the approximately 20 to 30 foot area around the periphery. No artifacts were identified other than occasional modern refuse (plastic, metal) and none of these were found as other than isolated occurrences. The access road was also similarly examined, without the recovery of any materials. The final phase of the survey was to excavate approximately 1-foot square shovel tests at 100 foot intervals and screening the fill through ¼-inch mesh. These were conducted on two north-south transects and two east-west transects, placed to allow coverage of as wide a range of areas as possible. A total of 22 shovel tests were examined.

The shovel tests predominately revealed soil profiles suggestive that some amount of the A horizon had been removed and I never identified an A horizon greater than about 0.5 foot in depth. In addition, sticks and other debris were frequently found at the base of the A horizon or mixed into the B or C horizon immediately below (see Figure 11).

These shovel tests failed to identify any cultural remains.

Summary of Results and Recommendations: The background research identified only one prehistoric site within the 0.5 miles APE and it had been heavily damaged by logging. Examination of several historic period maps failed to reveal any activity in the project area. More recent aerial images, however, revealed that the area had been cultivated and logged on several occasions. This suggested that the area would exhibit significant damage.

This anticipated damage was confirmed by 22 shovel tests that showed shallow A horizons, the presence of debris in the A and B/c horizons, and also failed to produce any cultural remains.

Extensive pedestrian survey conducted in areas with good to excellent surface visibility also failed to produce any cultural remains.

As a result, we do not recommend any additional investigations in the proposed sand mine pit.

Figure 8. Aerial images from 1999 and 2019. At the top is the 1999 image showing that prior to any mining, much of the western half had been cultivated. The lower photograph shows the area in 2019, after the excavation of both pits and the clear cutting of the vegetation, which by 2020 had been allowed to grow up again, necessitating yet another episode of logging.

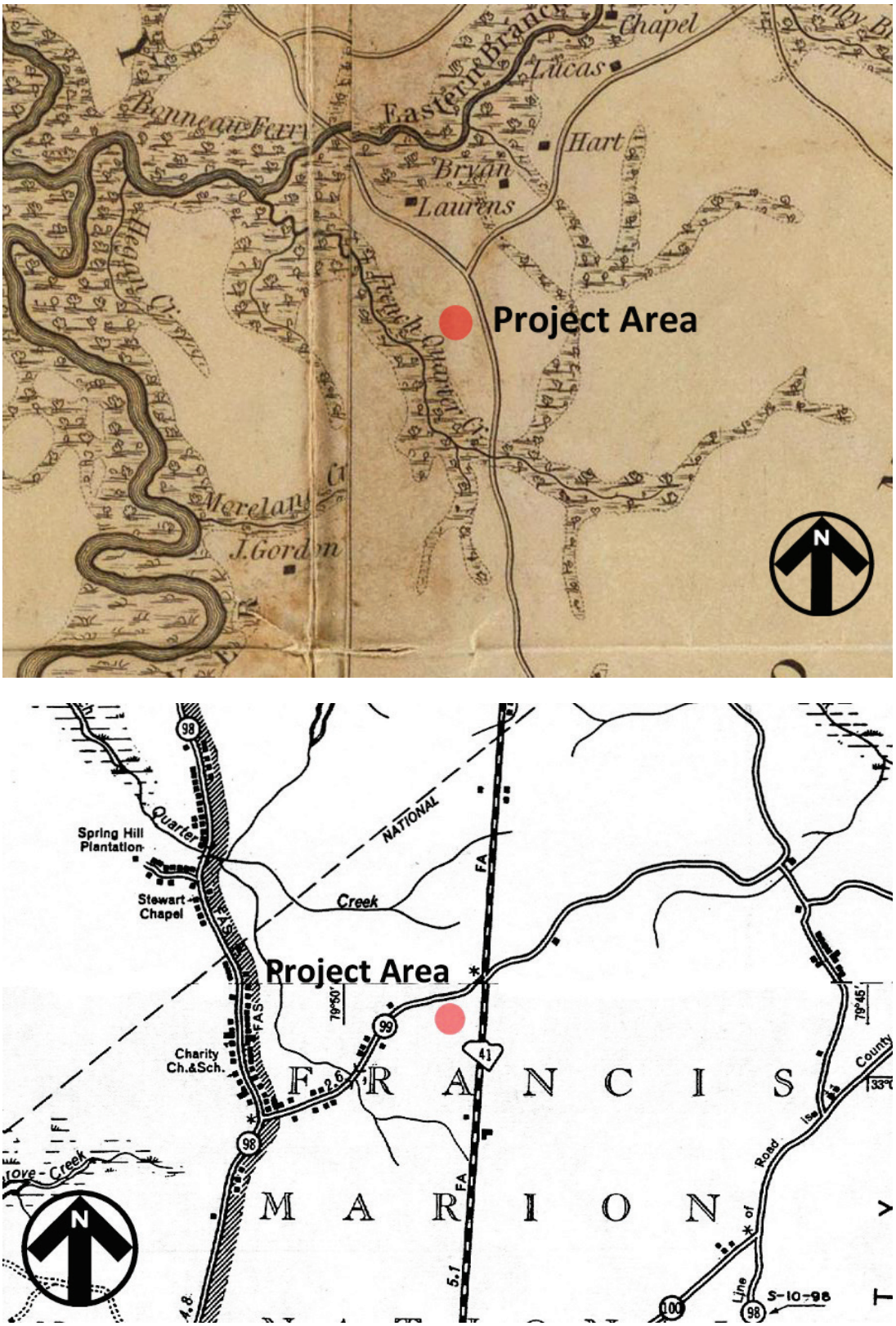


Figure 9.Historic maps of the area. At the top is the 1825 Mill's *Atlas* showing the project area about 1.5 miles north of the French Quarter Creek crossing. Below is the 1951 General Highway and Transportation Map for Berkeley County showing the project area.

Figure 10. Plan of the proposed borrow pit showing the access road and shovel testing.

Figure 11. Examples of shovel tests. On the left is a test with a shallow A horizon (0.4 foot). On the right, the A horizon is about the same depth, but is lensed with disturbance levels.

It is possible that archaeological remains will be encountered in the project area during the pit excavations. Crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the supervisor, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No excavation should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

Sources Cited:

Williams, G. Ishmael, John S. Cable, Mary Beth Reed

1992 *An Archeological Survey of 2,195 Acres in the Cainhoy Area Wambaw and Wttherbee Districts, Francis Marion National Forest, Francis Marion National Forest Indefinite Services Survey Report 1*. New South Associates, Stone Mountain, Georgia.

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