8-16-2022

Furman Landscapes Archaeological Project: Spring 2022

Andrew Womack

Anna Blackman

Miller Cassidy

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See next page for additional authors

Authors

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Is this a revisit? No

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
SITE INVENTORY RECORD
(68-1 Rev. 2015)

STATE: SC COUNTY: Greenville SITE NUMBER: 38GR391

Recorded By: Andrew Womack Affiliation: Furman University Date (MM/DD/YYYY): 8/16/2022

A. GENERAL INFORMATION

1. Site name: Furman University - FU22 Project: Furman Landscapes Archaeological Project
2. USGS Quadrangle: Greenville, SC Date: 2020 Scale: 1:24000
3. UTM: Zone 17 Easting 368570 Northing 3866422 Reference Datum/Year WGS1983
4. Other map reference:
5. Descriptive site type (see handbook):
   Prehistoric Historic X
6. Archaeological investigation: Survey Y Testing Excavation Y
7. Property owner: Furman University Phone number: (864) 294-2000
8. Address: 3300 Pointsett Hwy, Greenville, SC 29613
9. Other site designations:
10. National Register of Historic Places recommendation: Eligible Not Eligible Y Additional work
11. Level of significance: National State Local
12. Justification:

In support of the Furman Landscapes Archaeological Project we undertook surface survey and test excavations at the site of remains of a historic building in a wooded area of campus. We initially identified the building via historic maps and aerial photos from the 1940s covering an area that is currently occupied by the Furman University campus. Additional information on the building was not available in archival records, so the goal of survey and excavation was to accurately date and possibly determine the use of the structure.

Office Use Only

Determined eligible: Determined not eligible: Date:
On NRHP: Date Listed:

B. ENVIRONMENT AND LOCATION

1. General physiographic province: Piedmont
2. Landform location: Flat wooded land Site elevation (above MSL): 975 (in feet)
3. On site soil type: Red clay Soil classification: Clay loam
4. Major river system: Santee Nearest river/stream: Reedy River
5. Current vegetation: Pine/coniferous Hardwood Mixed pine/hardwood Y Old Field
   Grass/pasture Agricultural/crops Wetlands/freshwater
   Wetlands/saltwater Other Comments:
6. Description of groundcover: Heavy

C. SITE CHARACTERISTICS

1. Estimated site dimensions: 40 meters by 40 meters
2. Site depth: 80 cm.
3. Cultural features (type and number):

Cultural features include above-ground and subsurface remains of at least one structure dating to the late 19th or early 20th century. Remains of a paved road or driveway are also visible in some areas with scattered artifacts dating from the late 19th century to present.

4. Presence of: Midden Floral remains Faunal remains Shell Charcoal
5. Human skeletal remains: Absent Preservation: Poor
6. General site description:

The site is located on the Furman University campus in a wooded area approximately 150ft north of the northern end of the North Campus Intramural athletic fields. The site can be accessed by a trail leading off of the eastern side of Old Roe Ford Rd (K-97) approximately 200ft south of the intersection with Glenrose Ave. The site area is marked by a clearing with three large trees and a concrete porch foundation.

7. Verbal description of location:

Walking north on Old Roe Ford Rd through the Furman campus turn left into the woods approximately 200ft past the end of the north campus intramural fields on a clear trail with remains of an old asphalt road. Follow the trail a few hundred feet until you see a large clearing with three very large shade trees and a concrete foundation, marking the site area.

----------INCLUDE SITE MAP(S) AT END OF FORM----------

D. ARCHAEOLOGICAL COMPONENT

Paleo Indian		Late Woodland		16th Century	
Early Archaic		Any Woodland		17th Century	
Middle Archaic		Mississippian		18th Century	
Late Archaic		Late Prehistoric		19th Century	Y
Any Archaic		Contact Era Prehistoric		20th Century	Y
Early Woodland		Unknown Prehistoric		Unknown Historic	
Middle Woodland					

E. DATA RECOVERED

-------**INCLUDE INVENTORY AT END OF FORM**------- total number of artifacts: 106

F. DATA RECOVERY METHODS

1. Ground surface visibility: 0% _____ 1-25% Y 26-50% _____ 51-75% _____ 76-100% _____
2. Number of person hours spent collecting (total hours X total people): 1
3. Description of surface collection methods:

Type			Extent		
	grid collection			complete	
	grab collection			selective	Y
	controlled sampling	Y		no collection made	
	other (specify):				

4. Description of testing methods:

Method

Comments:

	Number	Size	Depth	
Auger				cm
Posthole				cm
Shovel				cm
Other				cm

5. Description of excavation units:

Number	Size	Depth		Comments:
2	6x6ft		cm	Of the laid out excavation units we excavated 3x6ft in the eastern half of each unit. Units were placed in in what we assumed were the front and back yards of the structure.

Put additional sizes in comments.

G. MANAGEMENT INFORMATION

1. Present land use:

Agricultural		Residential, high density	
Forest	Y	Commercial	
Fallow		Industrial	
Residential, low density		Other (specify)	

2. Present condition/integrity of site:

Type Intact Extent

Nature of Damage	
erosion	
cultivation	
logging	
development	
vandalism	
inundation	
other (specify)	

3. Potential impacts and threats to site:

Potential threat: Low

Nature of Threat			
erosion			
cultivation			
logging			
development		Impact Zone	
vandalism	Y		
inundation			
other (specify)			

4. Recommendations for further work:
Survey _____ Testing _____ Excavation Y Archival _____ None _____ Other: _____
Comments:
Our excavations were slowed by many rain days in our limited excavation schedule, so we plan to continue excavations in 2023 in order to better understand the stratigraphy of the site.

5. References: Historic/archival documentation Yes
Plyler Papers, Furman University Library Special Collections

Archaeological documentation Yes
See full 2022 site report attached.

6. Additional management information/comments:

7. Location of existing collections: Furman University Library Special Collections; Furman University Earth and Environmental Sciences Department

8. Location of photographs: See full site report.

9. Location of special samples: _____
Type of special samples: _____

Signature of observer: _____ Date: _____

INITIAL THE FOLLOWING

I have compared the map location to the GPS coordinates: AW

I have included a site map: AW

I have included an artifact inventory: AW

Please combine your site map and artifact tables with the Site Form in **a single PDF**, placing them at the end of the document. The PDF should be emailed to dertingk@mailbox.sc.edu or delievered using www.wetransfer.com. Shapefiles/geodatabases are welcome additions to the submission.

Furman Landscapes Archaeological Project: Spring 2022

Greenville County, South Carolina

Final Report

August 2022

Prepared by:

Andrew Womack, Ph.D
Principal Investigator

Co-Authors:

Anna Blackman

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Dayna Thomas

Mallory Tutterrow

Brynn Schmitt

Ellie Winters

ABSTRACT

This project included an archaeological survey by Prof. Andrew Womack and students in ANT-304 Archaeological Methods and Theory in Spring of 2022 on the campus of Furman University. The archaeological survey, located on campus property, exists as part of ongoing research conducted by the "Furman Landscapes Archaeological Project" in order to garner a better understanding of the land-use and occupation history of the current Furman campus. Our focus this season was on the remains of a historic structure visible in aerial photos from the 1940s, but with only a foundation are surrounding debris visible today. Our survey and test excavations of this area allowed us to garner a better understanding of the dating and use of this building, which most likely was occupied from the late 1800s or early 1900s until around 1950. Our research also laid the groundwork for further archaeological investigations in this and other areas of campus.

TABLE OF CONTENTS

1. INTRODUCTION

This project was conducted by Prof. Andrew Womack and the students of the Spring 2022 ANT-304 course, Archaeological Methods and Theory, at Furman University. All research took place on Furman University's campus, located at 3300 Poinsett Highway in Greenville County. The site itself was located in a small, wooded area of campus, in close vicinity to upperclassmen housing and the North Campus Intermural Fields. The area in which the excavation would take place was first identified by Prof. Womack and research students during the fall 2021 semester as part of research supported by a Seeking Abraham Academic Initiative Grant project, which focused on researching the history of the campus landscape in order to identify and address the University's past dealings with slavery and/or indigenous displacement.

This location was selected for further researcher after we identified what looked like the presence of a building in this location on aerial photographs dating to the 1940s. Consultation of records in the Furman archive, and with long-serving staff in campus landscaping, corroborated that a building once stood on this site, but the use, dating, and ownership of the building remained unclear. Since this was one of the few areas with former structures that is not currently on a heavily used or rebuilt portion of campus, we selected this locale for our initial ground-truthing exercises and eventually for test excavation as well.

We first visited the site area in January of 2022 and undertook an informal survey, quickly identifying the remains of wat appeared to be a concrete front porch in the same approximate location as the building appeared in our aerial photos. Collected artifacts from this area mostly coincided with more recent uses of the woods as a location for student extracurricular activities, with an abundance of broken alcohol bottles as well as some sports equipment, likely from the adjacent field. We followed this initial identification with a systematic surface survey of the area for any features or artifacts. Approximate survey lines were laid out in our GIS of the area and then found in the field using a map and phone-based GPS. Eight lines were considered enough to cover the open area in the forest surrounding the building remains. Students walked the area in lines 3 meters apart from each other, using compasses to ensure that they

walked in the same direction. Additional artifacts were recovered from the area, such as discarded clothing, bottle, and a lacrosse ball, however these all appear to be related to recent uses of this land.

In order to further investigate the remains, we decided to undertake two test excavations around the porch structure. Two 6x6ft trenches were laid out in what we identified in the front and back yards, respectively. The locations were selected based on the few available open spaces that were not interrupted by tress or plants. The trenches were labeled T1 and T2 and a datum was created on the concrete porch using a screw drilled into the concrete in the northwest corner of the structure. T1 was located directly south of the datum, while T2 was northeast of the datum. Each trench was subdivided into two sections, a western half and an eastern half, of which there was only time for the eastern half of each trench to be excavated during our season. Excavation of the trenches took place in March and April 2022. Several dozen artifacts were recovered which appear to be related to the construction and occupation of the structure, and not to later uses of the land by Furman students. The various findings of the site and the analysis taken thereof are discussed further in the Laboratory Methods section of this report.

Figure 1.1 Project Location map for Greenville County, South Carolina

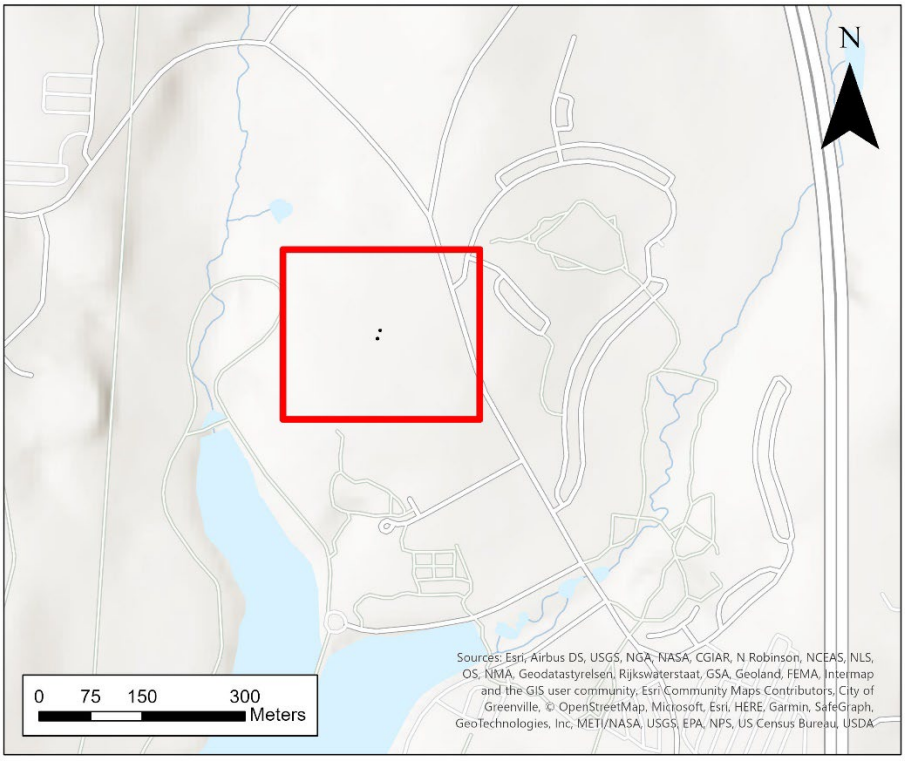

Figure 1.2 Location of project (red rectangle) and trenches (small black squares) within designated area

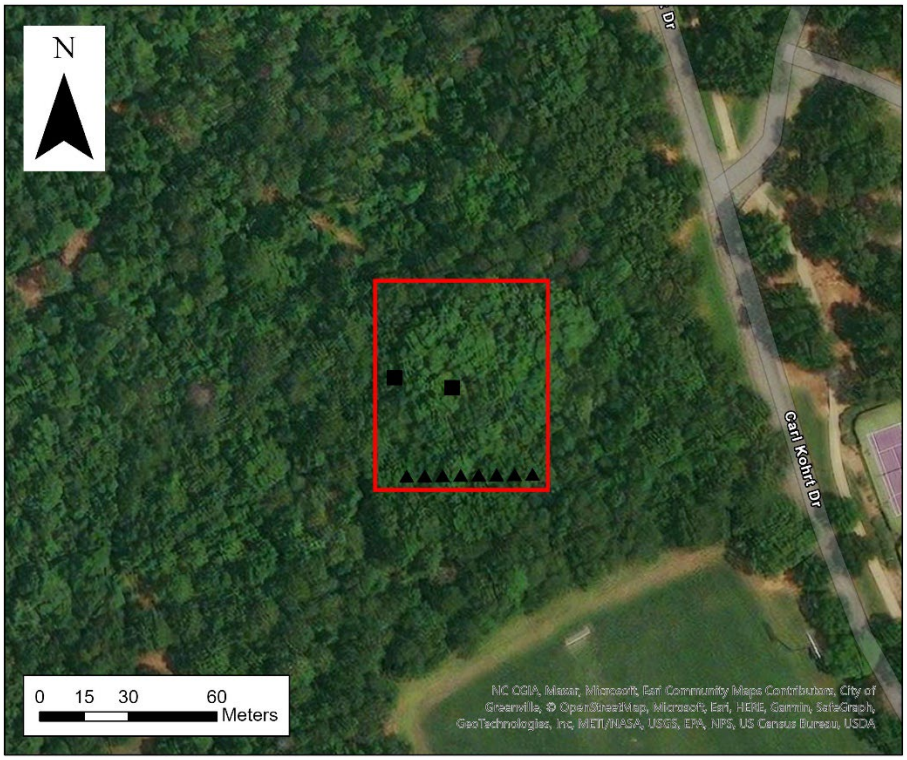

Figure 1.3 Surface Survey starting positions (southern line of triangles), trench locations (black squares), and total extent of survey area (red rectangle).

2. ENVIRONMENTAL SETTING

This project took place in the Piedmont region of South Carolina in Greenville County, located in the Santee River Basin. It is bounded by Carl Korht Drive to the East, Dave Garret Drive to the South, and a tributary creek to the Reedy River to the West. The small, wooded area around the site is made up of an array of hardwoods and pines native to the surrounding area. The predominant soil type in this area is red clay, which is almost expected in the Southeastern United States. The topography of this region consists of predominantly flat lands that steadily decline as the region stretches Southeast, with the site location resting at around 1053 ft. above sea level. There are, however, monadnock mountain formations scattered throughout the region, Paris Mountain being one that rests 1.73 miles from the site.

These mountains are remnants of previous tectonic activity in the region from around ten million years ago that were more resistant to erosion than other natural material (Foster, 2016). The erosion of the surrounding features created a sediment rich riverbed in the floodplains that made itself desirable to indigenous groups and later to early European settlers. The settler farmsteads in the area turned from subsistence farming to growing cash crops, such as cotton, around the 1790s. These more intensive farming practices placed a heavy demand on the soil. This led to more intense erosion of the topsoil over the years. The signature red clay of the area contributed to this erosion due to the fact that it does not retain water well and leads to heavy runoff during the rainier seasons.

The climate in this area is subtropical with hot and humid summers and cool winters. The hottest average daily temperature peaks in July at around 89.8°F and the lowest daily average sits in January at around 30.9°F. The daily average high temperature for the warmer season is 89°F and daily average high temperature for the colder season is 59°F. Greenville averages 51 inches of rain per year, with the wetter season lasting from May 16 to August 28. This affected our research because March, the month where the majority of our excavations were supposed to take place, is the month with the second most amount of rainfall per year, averaging around 4.6 inches of rainfall in the month. This resulted in a handful of our excavation dates having to be canceled or postponed.

The present use for this land is its status as property of Furman University. The specific area of campus that the project took place on is a wooded area that is often used recreationally by students and campus visitors alike. The area is also used by the campus' ROTC program for combat training and simulations.

3. CULTURAL CONTEXT AND PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

The history of pre-contact occupation in South Carolina is subdivided into four different eras, the Lithic, Archaic, Woodland, and Mississippian. The current date of the Lithic period in North America took place around 12,000 BP and ended around 8000 BCE. The hypothesized theory of human arrival to the continent is migration of people groups across the Bering Strait during the end of an Ice Age glacial period. These groups made their way down the Pacific coast before spreading to other areas of the continent. These people groups were predominantly nomadic, participating in hunting subsistence practice and seasonal relocation patterns. The Archaic period took place from 8000 BCE to 1000 BCE and witnessed many Holocene environmental changes, such as forested areas reflecting modern types and species. The subsistence practice of this period was hunter-gather based, with more sedentary practices showing up in the Late Archaic period. The end of this period is also when the first evidence of pottery production and use occurs.

The Woodland period occurred from 1500 BCE to 1100 CE, with changes and diversifying of ceramic patterns and hunter-gatherer subsistence strategies. An increase in population during this period also led to expansion and populations consisting of smaller numbers than in the Archaic period. Rising sea levels near the end of this period lead to further changes in settlement and subsistence practices, leading into the Mississippian period. This last pre-contact era lasted from 1100 CE to 1550 CE and was the era in which the development of most native hierarchical societies took place. The subsistence and settlement practices reflected this, in that it developed into sedentary farming practices (Bailey & Sherard, 2021).

The colonial period is when much of the documentation of Indigenous peoples starts to become muddled, in part due to the influx of new diseases to these populations and being barred from documenting their own history in a way that seemed valuable to white Europeans. Constant warfare, slave raids, and colonization pushed Indigenous groups out of their homelands and onto reservations (Bailey & Sherard 2021). The colonizers who did settle in the area were predominantly farmers and plantation owners, who also owned many enslaved peoples to work their land. Settlement patterns of these farms and plantations often followed waterways in terms of getting to a different area and being used as part of the farmland itself. Farmers in the 18th century would seek out farmland along waterways in order to make use of mills and to utilize the rich soil of the area (Trinkley et. al). The plantations located around the Greenville area were smaller than those in the low country, a plantation housing 20-50 slaves being a rarity. A road system began to replace the waterways in the 1820s as the main means for transportation, and later on it would become the main landmark that houses would orient themselves by stretching into the 20th century.

As stated previously, the over farming of the land in the Piedmont region for cotton cash crop resulted in a decline in the quality of the soil. This caused a transition to industrialization, mainly in the form of textiles, in the late 19th to early 20th century (Fisher, 2016). Cotton and textile mills created their own villages and communities that essentially became urban centers of their own (Trinkley et. al., n.d.). By around the 1920s, Greenville had at least nine different mills in the area (Trinkley et. al., 1995). Even with the existence of these mills, there was still a good amount of farmland to be found in Greenville, but each farm had a smaller amount of acreage than in previous years. During the Depression, however, tenant farmers were hit hard by the economic collapse, and many of the New Deal efforts benefitted the owners more than them. The tanking prices of land, buildings, and machinery continued on until the start of World War II (Trinkley et. al., 1995). Going on into the 1940s, predominantly white farmers lived in Greenville County.

Currently, there is not a large amount of archaeological research on more modern Upstate farmsteads, one of the closest examples being data surveys and excavations of farms from the late 1800s in

Greenville and the surrounding area (Trinkley et. al., 1995). There have also been various studies done on mill villages, such as at Sampson Mill village just outside of Greenville (Trinkley & Adams, 1993).

4. RESEARCH DESIGN

4.1 Background Research

The research for this survey was conducted over the course of the Fall 2021 semester by Prof. Andrew Womack and student researchers Dayna Thomas, Kylie Gambrill, and Abby Russell. Focusing on documents held in Furman Library Special Collections, they gathered information on who previously owned the land that Furman is situated on including plot maps, meeting notes, and draft purchase contracts. This research revealed who owned each plot of land and the building plans that Furman had for the campus after its purchase. Historical analysis was also utilized in this research in order to get a wider lens of what was happening in the area surrounding the future Furman campus at the time. This was done in part through visiting the Museum of Travelers Rest to garner more information on the prominent families who owned the land in the vicinity of the Furman campus in the early 1900s. A composition of historic land ownership maps and current land ownership/use was compiled into an ArcGIS database to map land usage over time. The maps were of the land immediately before and after Furman purchased it, and the current campus layout.

Using maps in our GIS database, we were able to locate a number of buildings that existed prior to the construction of campus in the 1940s that are no longer on the landscape today. The goal was to find buildings that might be promising locations for archaeological excavation that in turn could shed light on the date and use of the structure, since such information was not available in the records we located to date. We found a number of promising locations across campus, eventually focusing our attention on structures that were located in what is now a wooded area just north of the North Campus Intermural Fields. After visiting the site, which contained building foundations and a lot of potential artifacts, we selected this location for our excavation.

Figure 4.1. 1940s aerial photo showing location of buildings, roads, and trees compared with our general survey area (red square) and excavation units (small black squares).

4.2 Surface Survey

Before undertaking any systematic survey, we first conducted an informal general survey of the wooded area around our site. During this survey, we located a concrete slab that we believe to be the front porch of a building that we found on aerial images from the 1940s. Following that we did a systematic

transect survey around the remains. To conduct the surface survey we first consluted a GIS map of the region and laid our survey lines running south to north at 15 ft intervals along a clearing in the woods surrounding the site area. Eight students lined up along the southern edge of the clearing, determining their spacing using GPS points and a tape measure. In total, the survey covered 120ft east to west across the site area and the students walked for an average of 130 feet, picking up any items that they came across. All of these items were then bagged and labeled with the date, number of items in the bag, and the collector's initials. Because the site is located in a heavily covered forest, there is some variation in the distance that people walked and whether or not they were able to walk in a completely straight line. For example, there were trees or mounds that needed to be walked around during the survey. The forest cover also diminished ground visibility. The surveyors had to move foliage and shift leaves aside in order to properly conduct the survey. All of the items picked up during the surface survey appear to be related to recent college activity and not historic. We undertook test excavations in order to get a better idea about the occupation of the building that was there in the 40s.

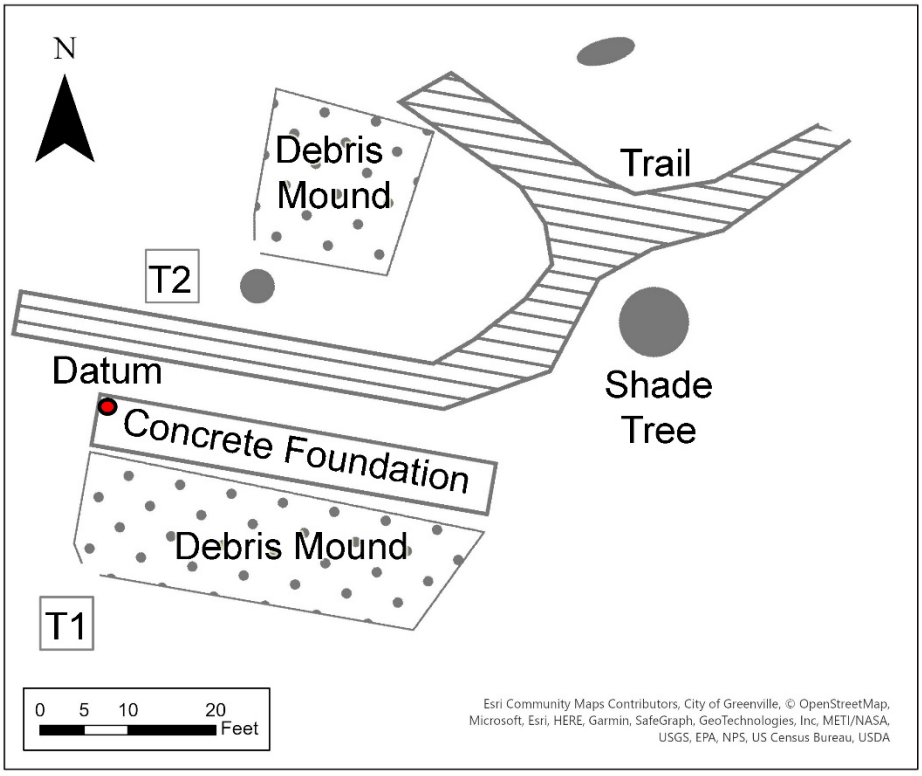

Figure 4.2. Labeled map of site area including notable features, datum, and trenches.

4.3 Excavation

Two trench sites were chosen: one north of the porch structure and one south of the porch structure. Both trenches were mapped on a north-south axis and had a length and width of 6 ft by 6ft. Both trenches were further divided in half on the north-south axis, and the eastern half (a 6ft by 3ft rectangle) on each became T1L01 and T2L01 respectively. Students were broken up into teams of four to work on these trenches supervised by Prof. Womack. In the beginning stages of both trenches, trowels were the primary means of excavation, later on replaced by shovels due to the very hard nature of the ground. Brushes and dustpans were used to move excavated soil into ¼ in. mesh screens for sifting and artifact recovery.

In T1, an abundance of thick tree roots hindered some excavation efforts, however shovels were able to be used due to the thickness of L01. T1L02 had the same trench length and width, yielded a similar type of artifact to L01, and had an even larger abundance of large and cumbersome tree roots. T1 yielded a high amount of metal and glass, particularly in the form of nails, and pieces of window and bottles. One unidentified object with a carving of a bird on it was also found. Artifacts were found through a combination of excavation by trowel and mesh screening. The soil was clay with a thick, crumbly texture. The color of the soil (Munsell) below the topsoil layer was 10R36. The top of the trench began 17 in., 12.5 in., 16.5 in., and 14 in. below our datum point at the northwest, northeast, southwest, and southeast points respectively. The bottom of T1 was measured at 35 in., 32 in., 38.25 in., and 37 in. below our datum point at the northwest, northeast, southwest, and southeast points respectively. See Appendix II for all excavation drawings and Appendix III for photos.

When removing the topsoil layer in T2L01, team members noticed a change in the soil color and texture in the northern part of the trench. This area of change was marked, measured, then divided into two along a north-south axis to have a cross section available. The eastern half was excavated as L02. The length and width of L02 made a 19 x 19 in. square in the northeast corner of the original trench. While L01 was a compact clay loam level with many natural artifacts such as small branches, roots, and acorns, L02 had a much sandier texture, multiple soil types/colors, and contained a high volume of small rocks. Soil

color (Munsell) in L02 included 10R36, 7.5YR58, and 10YR21, but soil color in L01 contained just 5RY33. It was undetermined whether the change in L02 indicated a feature. In both loci, a small amount of glass and metal artifacts were found. L03 combined the layer that covered the bottom of both L01 nad L02. Since L03 was a very thick, homogeneous clay, with little artifacts, shovels were used to excavate this layer. The soil that came out of L03 was almost too thick to be used with the ¼ in. mesh screen, so much of it was sorted hastily by hand. While L01 nad L02 created a slight downward slope in the southern direction, L03 returned the bottom of the trench closer to a level line. The top of T2 began at 12 in., 9 in., 9 in., and 7 in., below our datum point at the northwest, northeast, southwest, and southeast points respectively. The bottom of T2 was measured at 24 in., 23 in., 22.5 in., and 24 in., below our datum point at the northwest, northeast, southwest, and southeast points respectively.

The excavation was hindered by rains throughout the three months of excavations. This may have caused changes to the soil texture and color. T1 was also infested with ants that had to be removed on the last day of excavations. T2 accumulated a lot of water leaking in from our tarps that may have contributed to the thick, compact nature of L03.

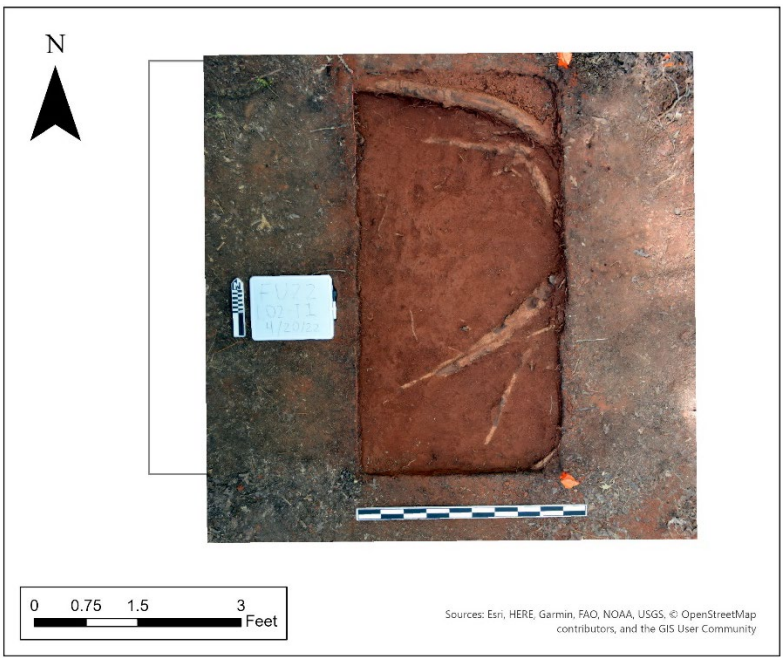

Figure 4.3.Trench 1 L02 bottom photograph.

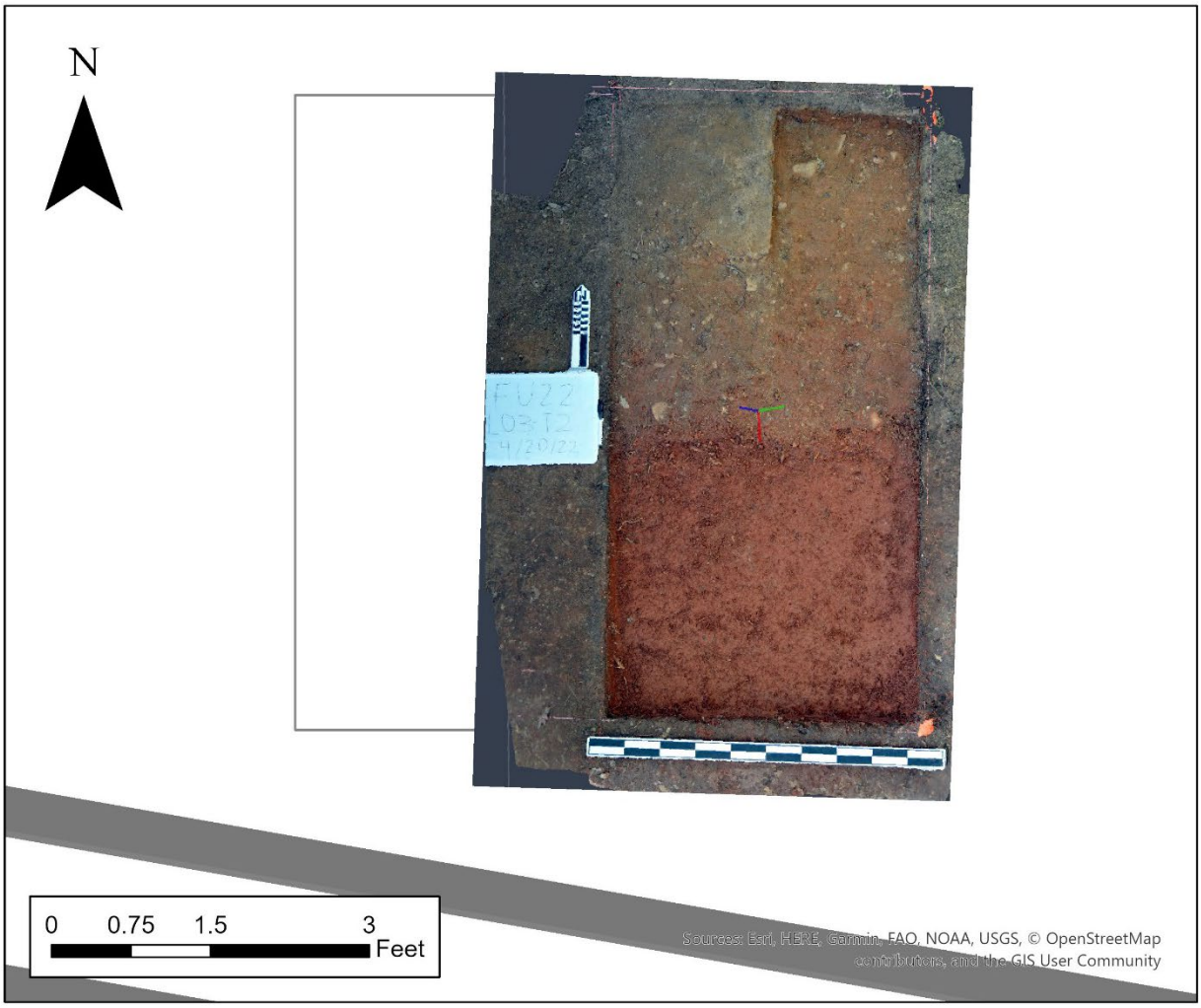

Figure 4.4. Trench 2 L02 Bottom Photograph.

4.4 Constraints on Fieldwork

There were various constraints on the excavation. Firstly, since excavation was only conducted during a lab period of two hours, once a week, there was very limited time to dig. On top of pre-existing time constraints, bad weather also affected time spent in the field. Several class periods had to be canceled because of heavy rain and the schedule did not necessarily allow for make-up days. The forest floor also made it more difficult to conduct excavation. The overgrowth was hard to clear out in order to begin the dig, and continued to be a problem throughout. One of the trenches was located near the base of a large tree, and the roots from the tree spread throughout the trench. As a result, a lot of time was spent cutting out roosts in order to continue excavating deeper. Another side effect of the forest environment was the plethora of bugs

that infiltrated the trenches. On the last day of excavation, one trench was not able to continue digging at all because of an ant infestation. The time constraints of the excavation meant that there were sometimes weeks in between digs. This prolonged period of time resulted in ants turning the trench into a full blown ant hill. The team working on that trench had to spend the final excavation day clearing out the ants and re-cleaning the edges of their trench. Due to this, trench one in the backyard received a less thorough excavation then trench two in the front yard. Trench two was able to dig deeper, and they had virtually no large roots obstructing their excavation. Trench two excavated until they had reached virtually sterile dirt with basically no artifacts being discovered. Though trench one was not able to dig to this same point, both trenches uncovered a wealth of artifacts that could aid in dating the site such as nails and glass.

5. LABORATORY METHODS

5.1 Historic Nail Analysis

5.1.1 Literature review on historic nails. There is a small body of research to pull the chronology of iron nails from, with the majority of the most relevant articles being published in the late 1990s and before 2010. Research also discusses nail typology in Europe and Africa, which there are several articles on, but are not beneficial to this excavation.

However, the most significant work in this area is Lee H. Nelson's pamphlet released in 1968 about the production of nails in the United States and how the shapes of nail heads and shafts evolved as the Industrial Revolution changed and automated production techniques. Nelson's (1968) classification system outlined in his chronology and hand-drawn diagrams was used during this excavation. Nelson also provides guidance for what factors to consider when utilizing iron nails as a dating tool, stating that cut nails are more reliable dating tools because of how clear the evolution of their manufacturing is.

Tom Wells' 1998 article agrees that Nelson's (1968) method is the standard for nail chronology as of writing his article. Wells also describes other classification methods that were created before and after Nelson's system, referencing a simplification of the Nelson system from 1972 and an earlier article written by Henry C. Mercer in 1924, which Wells calls a 'pioneering work' (1998). Wells is attempting to create a

chronology for nails in Louisiana, and documents his research process throughout the article. He provides tables recording the features of nails and their locations, as well as drawn diagrams of each type discussed in the article. Wells asserts that an accurate nail chronology should require a typology that is based on observable and objective criteria—which is based off of the observed features produced by manufacturing methods throughout time (1998). Wells also suggests that the chronology developed in the article may be applied to other geographical areas, such as the Mississippi River Valley.

Ryzewski and Gordon (2008) go more in-depth into the manufacturing of nails, both hand-wrought and machine cut, in order to create a better classification system based on laboratory observations. Utilizing optical and electronic microscopes, Ryzewski and Gordon were able to examine the internal metal structure of a variety of nails. The article also discusses iron smelting and smithing techniques that were used during specific time periods, as the manufacture dates of the nails observed in the study ranged broadly from 300 BC to 1985. The section in the article about cut nails, on page 54, provides an overview of general characteristics of the microstructure of cut nails and describes the burrs and grain of the iron. This section also describes in detail how machine cut nails were made on page 55, explaining that the machinery used to clamp the shaft of the nail and leave enough iron to create a hammered head (2008). Electron microscopes and optical microscopes were not available during this excavation, therefore Ryzewski and Gordon's work is not as relevant as it perhaps would be if that technology had been available.

5.1.2 Nail Conservation and Analysis. All nails recovered from our excavations were packed in marked plastic bags and stored within the campus storage. During the excavation, 46 iron nails in total were uncovered from sites FU T1 and FU T2. There were 42 iron nails uncovered from site FU T1. Of those 42 iron nails, 4 iron nails were from locus 1 and 38 iron nails were from locus 2. There were 4 iron nails uncovered from site FU T2. Of the 4 iron nails, there were 2 iron nails from locus 1, 1 iron nail was from locus 2, and 1 iron nail was from locus 3.

The nails were cleaned by hand with a dry toothbrush over a wash basin by one person. The nails were cleaned on various dates. The cleaned and uncleaned nails were stored within different plastic bags

during the process of cleaning to keep them separated. After the nails were cleaned, they were analyzed and photographed then stored into their marked plastic bags. The nails from the different proveniences were cleaned and analyzed separately. The nails were cataloged by FCN, object number, year, site, locus, object type, material, color, length, width, notes, and photo number. After cleaning and processing, nails were categorized by head type, if present (square, circular, no head), and if the nail appeared to be manufactured by hand or by machine. There were 17 square head type, 18 circular head type, and 7 no head type iron nails from site FU T1. There were 3 square head type and 1 circular head type iron nails from locus 1. There were 14 square head type, 17 circular head type, and 7 no head type iron nails from locus 2. There was 1 square head type, 2 circular head type, and 1 no head type iron nails from site FU T2. There was 1 square head type and 1 circular head type iron nails from locus 1. There was 1 no head type iron nail from locus 2. There was 1 circular head type iron nail from locus 3. The specific classification method used was developed by Lee H. Nelson (1968) and was used by comparing the shape of the nails to the diagrams in Nelson's leaflet. Based on the chronology created by Nelson (1968), 20 of the 46 iron nails analyzed are modern wire nails used for roofing and finishing which includes common nails. Based on the Nelson (1968) chronology, 18 of the 46 iron nails analyzed are modern machine-cut nails used for flooring and roofing, based on width and length present in the collected group.

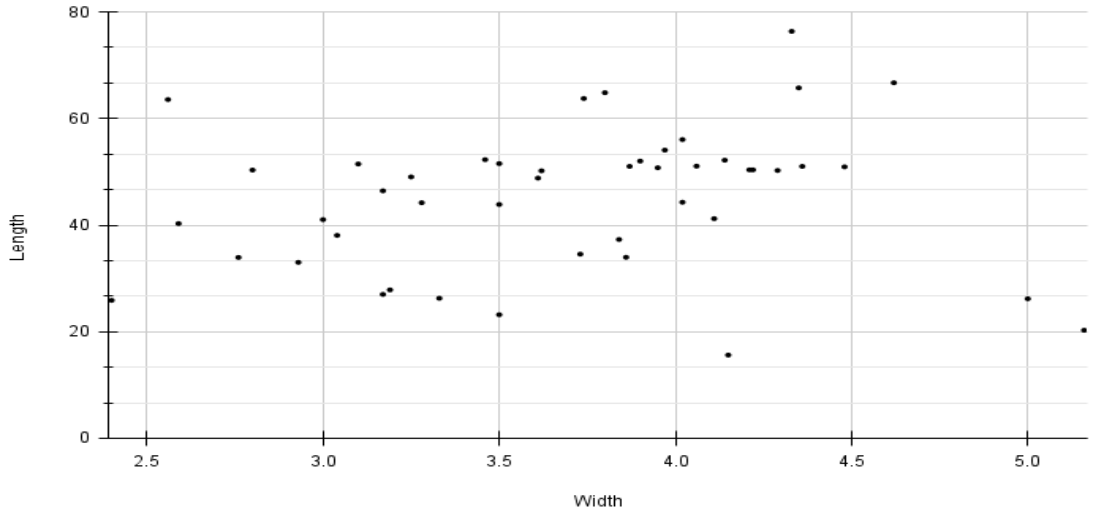

Figure 5.1: 46 Iron Nails graphed based on length and width

Based on the classifications and time periods outlined in the reviewed literature, a rough date for site FU22 can be determined. The presence of modern cut nails and wire nails together, the condition of the nails, and the date the house formerly on the site was demolished, it is appropriate to assume that the site dates to at earliest the late 19th century, and at latest to the 1920s or 30s.

5.2 Historic Glass Analysis

5.2.1 Glass in Southeastern Archaeology. Glass has long had an important role in archaeology due to its significant presence in sites and architecture. Glass has been commonly used for windows in homes since the 17th century in Europe and has been used in American homes for the entirety of the country's history (Varshneya 2016). Because of this, glass can be found as one of the most prevalent artifacts in most sites where buildings or houses were present. FU22 is the site we have been excavating since February 2022. The site includes what appears to be remnants of what was once someone's home. We have found large amounts of nails and glass during our excavation, so it is important to understand the different types of glass used in homes throughout American architectural history and the different historical analytical methods used to date glass. There is very little reliable information available regarding the types of glass used for construction in the Southeastern United States. However, there is some information available regarding the six most common methods used to analyze and date glass and where the methods were regionally employed. I will be focusing on the method used in the South in order to garner information on the glass we collected. Additionally, there is information available that discusses how over time, archaeologists have focused on the thickness of glass and used that as a determining factor in the dating of glass. Overall, I want to highlight the importance of glass's role in dating archaeological sites throughout time and summarize some of the methodologies used to do so.

5.2.2. Methods Used to Analyze Glass. According to Jonathan Weiland, there are six commonly accepted methods to analyze glass in archaeology. He mentions that there are possibly three more but that the main six methods are the most widely utilized. Weiland mentions how "The measurement of the

thickness of window glass to determine relative dates for historic-structure sites has been practiced by historical archaeologists for 40 years" (Weiland 2009). Typically, glass is used for dating purposes through the employment of analytical methods and regression formulas. Overall, most methods measure the thickness of the glass, take the general location of the glass into account, and then use the mean of the thickness data in regression formulas (Weiland 2009). The majority of the methods have been designed specifically for different regions of the United States, and the method that I am going to be focusing on, the Moir method, was used primarily in the Southern and Northeastern regions of the United States, as well as in Texas. According to Weiland, the Moir method is as follows:

> *select best possible context of glass from site, as opposed to seeking larger samples: foundation lines are best; scatters immediately next to walls are acceptable; only when glass from foundation lines or in scatters next to walls is not available should other glass be used; exclude glass from trash pits; confirm the structure was built after 1800 and before 1920; confirm the glass is flat by placing the glass on a flat surface and attempting to "rock" it back and forth by placing light pressure on opposite edges; confirm the glass is flat by letting light play across it; make sure the sample is window glass by eliminating potential bottle glass, mirror, or decorative glass shards; confirm glass is actually flat on both surfaces; confirm that glass bears no ripple marks which would indicate it was made in a bottle mold; confirm glass shards do not have beveled edges which would indicate the glass was decorative; confirm glass does not have silver backing indicating it is from a mirror; closely inspect glass that is pink or perfectly clear as it has a high probability of not being window glass; discard data when all pane thicknesses are greater than 3.2 mm; ID = 84.22 (TH) + 1712.7; where ID = date of site construction (±7 years) TH = thickness in 0.01 mm*

Moir's method details how to best choose pieces of glass, ensure that it is window glass and not any other type, analyze the glass in relation to the site, and perform mathematical formulas to date the glass. His method follows the scientific method and reflects positivist values. It is important to note that certain methods were created specifically for certain regions and that this has an impact on when the methods should be applied. Moir's method was used in the South primarily, so it may not be the best method to use at other sites. Glass dating methods should also always be used in conjunction with other dating methods

when possible. Although Weiland states that the Moir method is one of the more well-researched methods, it is still best to confirm and double-check with other methods.

5.2.3. Thickness of Glass Used for Dating Purposes. In addition to Moir's method, Schoen's method is relatively reliable, and his research led to some important findings regarding glass manufacturing and how that relates to the thickness of glass. As aforementioned, it is difficult to find information on the evolution of glass used over time and therefore more difficult to date glass. After a study was done on 20,000 glass fragments from 15 different sites, Schoen came to the conclusion that "First, changing cylinder glass manufacturing techniques were the source of variation of glass thicknesses over time. This allowed for more secure dating of specific thicknesses. Second, he realized that any flat glass chronologies that were constructed needed to be regional in nature" (Roenke 1978). Schoen realized that any credible glass dating methods would have to be contextualized by the region of the site where the glass was found and that the manufacturer and manufacturing process of glass was much more influential in the dating process of glass than first thought. Both of these conclusions were essential to the validity of glass dating methods in archaeology. However, unfortunately, the mechanization of society would change the impact of Schoen's findings. By 1905, a machine called the Lubber machine "became a major competitor in the glass making industry" and "effectively standardized the thickness of window glass" (Roenke 1978). Because of this, "flat glass chronologies according to thickness ceased to be viable" (Roenke 1978). From that point on, the main reason behind the variation in thickness between window glass would not be due to age, but due to manufacturer. Unfortunately, this is not nearly as helpful from an archaeological standpoint because the manufacturer of the glass will most likely not be able to help in determining the relative age of a site, whereas the age of glass found at a site would be helpful. Standardization of production methods leads to a lack of diversity and variation, which makes products much less unique. Knowing the manufacturer would provide very little specific information, especially in the case of window glass, because it is used in the majority of buildings and is mass-produced.

Although the presence of glass in our site is still extremely important because it is indicative of the possible function and past use of the site, it is not necessarily helpful for dating purposes. Because of the

several technological revolutions we have had in the United States since the Industrial Revolution, so many more products and materials are mass-produced and standardized in their production. This makes it incredibly difficult to gather site-specific information based on glass artifacts and makes it so that dating a site based on the date of glass is not credible. However, it is still possible to date glass credibly if the glass was produced or had a manufacturer before 1905 when the Lubber machine became prominent in the glass industry. Once we know more about the age of our site and the ages of other artifacts found at our site such as the nails, we will be able to contextualize the possible date of the glass. It will be helpful to know that window glass variation is manufacturer-dependent, window glass is relatively standardized after 1905, and glass analysis methods are more accurate in their regional context.

5.2.4. Glass Conservation and Analysis. During our excavation, Trenches 1 and 2 uncovered 56 individual pieces of glass. Trench 1 found 44 pieces of glass, while the other 12 were found in Trench 2. After being collected and taken back to the lab, they were placed in a basin and cleaned with water. Once the pieces were cleaned, we then measured their lengths, widths, and thicknesses with a caliper. We also began classifying the glass into two categories: window glass and bottle glass. Our main way to sort the glass into these two categories is if the glass is curved or not. The curved glass was categorized as bottle glass and the flat glass was categorized as window glass. I should also note that there were two pieces of glass that were unable to be categorized. The pieces were smaller than most and we could not decide on if the pieces were curved or just broken, resulting in a curve of some sort. Once the glass was categorized, we then placed the three colored pieces of bottle glass under a white light and used a Munsell chart to find the exact colors. All of the other glass pieces were clear once they were cleaned. The three pieces of bottle glass and their colors were: FCN 20-2 with a color of 5YR 6/8, FCN 12-6 with a color of 2.5YR, and FCN 10-7 with a color of 5YR 5/8.

After we finished measuring and classifying the glass, we needed to date the window glass. We could only date the window glass because there is too much variation of bottle glass due to the privatization and a lack of reliable historical information. We decided to use the Moir method, since it was reliable and focused primarily on glass produced in the Southeastern US. This method gave us a wide range of dates, the

mean being 1919, the median being 1913, and the mode being 1911-1912. This generally fits our estimates that the site was built in the early 20th century, however, there were around four outliers. Four pieces of glass from FCN 16 were dated 1972, 1975, 1976, and 1983. While this site has been on an active college campus since the 1960's, I believe that there was some kind of error with these four pieces. They were found lower in the stratigraphy than other glass found from Trench 1. Had they been higher up, it might be more plausible that the dating is correct, however, it was found surrounded by glass dating to the late 19th century and into the early 20th century. It is interesting to note that Trench 2 had the oldest glass discovered, dating 1863 and 1897. These two pieces were found in a manner that follows the law of stratigraphy, leading me to believe that these dates are correct. It was possible that there was a building or structure on the site, previous to the one we knew of, which would allow glass from this time to be present.

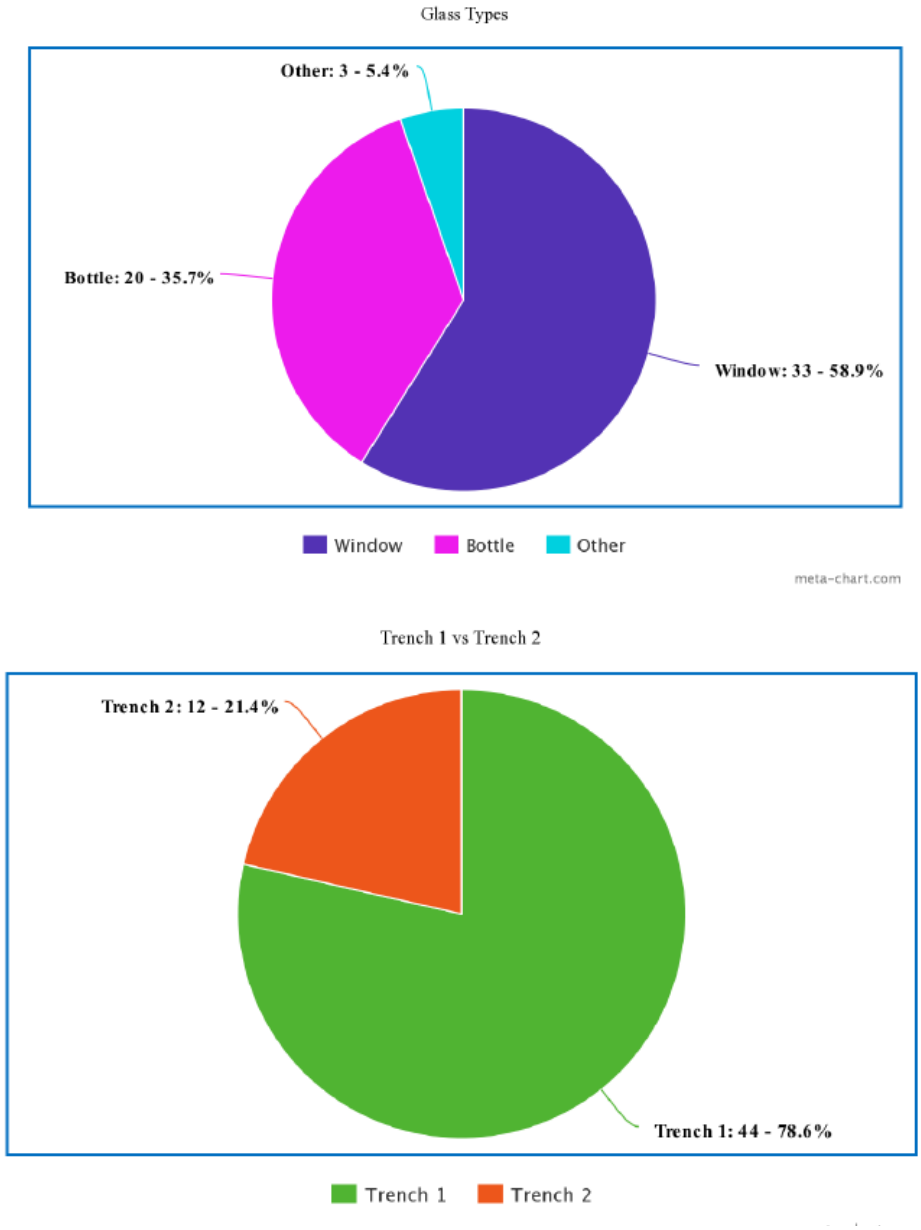

Figure 5.2. Pie charts of glass types (upper) and trench origins (lower).

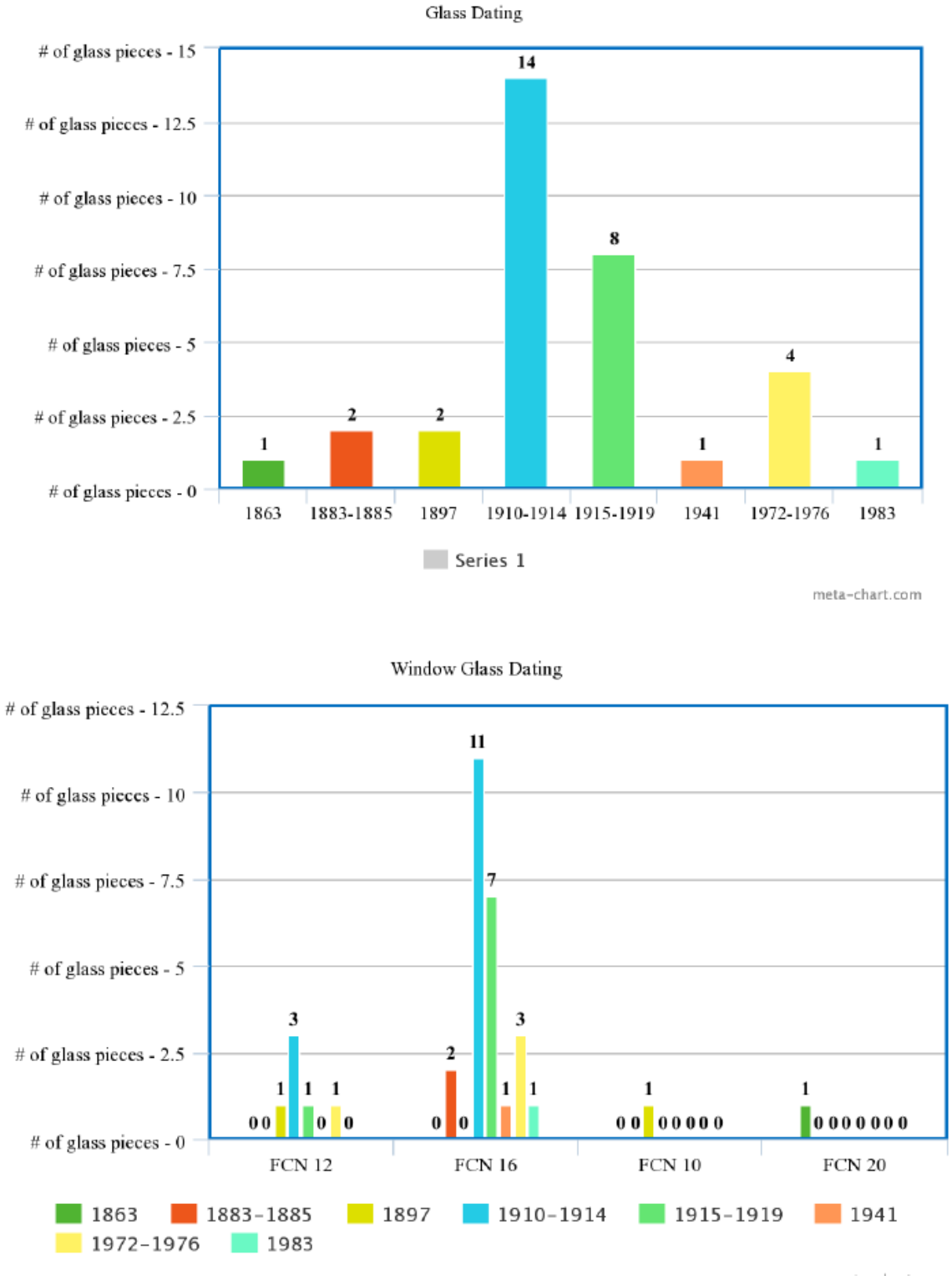

Figure 5.3. Graph of window glass by probable date of manufacture (upper) and trench of origin by date of manufacture (lower).

6.0 Results

6.1 Site Description

For our site, we created two trenches in an area hypothesized to be once the site of a house. One of the trenches was dug in the "backyard" of the house area, and the other was dug in the "front yard" of the house area. Review why we made this assumption. The trench in the "backyard" was Trench 1 (T1) and the trench in the "front yard" area was Trench 2 (T2). Each trench began as a 6ft-by-6ft square, which we then divided in half to have 6ft by 3ft rectangles. These trenches would be considered test units due to their small size. T1 encountered multiple features in the form of tree roots. As the trench was right next to a large tree, this was to be expected, however these tree roots impeded on the trench more than possibly expected. Some tree roots caused some sections to be at different layers than others since it was difficult to dig around the tree roots in those areas. T2 on the other hand, had more layers of strata than T1 and one feature, an especially compact area of soil and rock, unable to be dug through.

For both trenches, the first strata was a layer of topsoil before excavation began. However, strata began to differentiate as digging commenced. For T1 Locus 01, the top layer was topsoil and dirt made out of clay. The deposit structure was described as heterogeneous, the texture was crumbly, and the bedding was uneven. Deposit inclusions were roots, worms, leaves, and artifacts. Lastly, the Munsell soil color for Locus 01 was 2.5 YR 2.5/3. T1 Locus 02 was described as thick, crumbly clay, and was determined to be made out of clay. The deposit structure was homogeneous, the texture was crumbly, and the bedding was oblique shallow. Deposit inclusions were roots, bugs, and artifacts; and the Munsell soil color was 10 R 3/6.

For T2 Locus 01, the top layer was described as compact topsoil made out of clay loam. The texture was compact, the deposit structure was homogeneous, and the bedding was horizontal. The Munsell soil color of this locus is 5 YR 33. Deposit inclusions were roots, small rocks, bark, and acorns. T2 Locus 02 was described as less compact than L01 and very rocky. The deposit structure was heterogenous and the texture was compact. Lastly, the Munsell soil color was partially 10 R 36, 7.5 YR 58, and 10 YR 21.

In total, 106 artifacts were found from both trenches. 87 artifacts were found in T1, and 18 artifacts were found in T2. Of the 87 artifacts found in T1, 42 of the artifacts were nails, 31 of the artifacts were window glass, 11 were bottle glass, 2 were unidentified pieces of glass, and 1 was a figurine made out of an unidentified material. Of the 19 artifacts found in T2, 9 of the artifacts were bottle glass, 4 of the artifacts were nails, 2 were window glass, 2 were unspecified metal objects, 1 was milk bottle glass, and 1 was a champagne cork.

6.2 Associations

T1 and T2 produced a number of artifacts. While the majority of the artifacts came from T1, T2 also provided interesting input to our site. As it was hypothesized that the site we were investigating once held a house of some sort, it made sense that we found an abundance of nails and glass. In total, we found 46 iron nails with varying head types (square, circular, no head). Additionally, the 56 glass pieces we found were categorized as either window glass or bottle glass, with only three exceptions. One piece of glass was identified as milk bottle glass, and two pieces were unspecified. Other artifacts included a figurine made out of an unidentified material, 2 unspecified metal objects, and a champagne cork. Some of these other artifacts may be attributed to later occupation or use of the site, however the nails and glass were likely used during the occupation of the site during the time that there was a house in the area. Unfortunately, we did not have access to materials required for carbon dating, but through classifications and time periods researched through literature review of both the nails and the glass, a rough date for our site can be determined. Based on previously stated material, our site can be dated to a time period between the late 19th century up until the 1920s or 1930s.

6.3 Archival Research

Archival research was conducted prior to our excavation. Through archival research of Furman's campus, many things were found. For example, ownership of the plots of land that Furman purchased, as well as detailed documents concerning the sale of the land and building plans for Furman's campus. Historical research was also conducted in order to find out more about potential families that occupied the

land we excavated on as well as to broaden the horizon of our excavation and understand the happenings of the land and area at the time of the purchase and potentially around the time that we have dated the site too.

6.4 Site Significance and Recommendations

The current recommendation for this site is that the site is ineligible due to not enough current investigation. However, site significance is still being investigated in order to determine if this site is significant to the history of Furman's campus. Further investigation into this site will commence in the future to continue research on the possible occupations of the site and how it fits in to the narrative concerning Furman University as a whole.

This project set out to begin an investigation into the area on Furman's campus that already had remains of what looks to be a house. We utilized the resources available to us in order to give a rough estimate of a time period this house could have been occupied in, and further investigation will be needed in order to more accurately date the site and further analyze the artifacts we found throughout our short excavation period.

7.0 Conclusions

Investigations into the history of the Furman campus identified numerous previous owners of the land that now makes up Furman as well as photographic and cartographic evidence of buildings that are no longer present. Students in the ANT304: Archaeology Methods and Theory course undertook test excavations at the site of some of these building remains in the woods north of the north campus intermural fields in the spring of 2022 in order to understand the date and potential function of the building. Initial surface survey of the land turned up mostly contemporary artifacts associated with students, as well as a concrete building porch foundation. Two test trenches (T1 and T2) were dug to the north and south of the porch and artifacts thought to be associated with the structure including glass and nails were recovered. Dating of these objects revealed a construction period around the late 19th or early 20th century, while the function remains unclear but potentially was for residential housing. No further conservation or mitigation is recommended at this time and all documents and artifacts will be house at Furman University.

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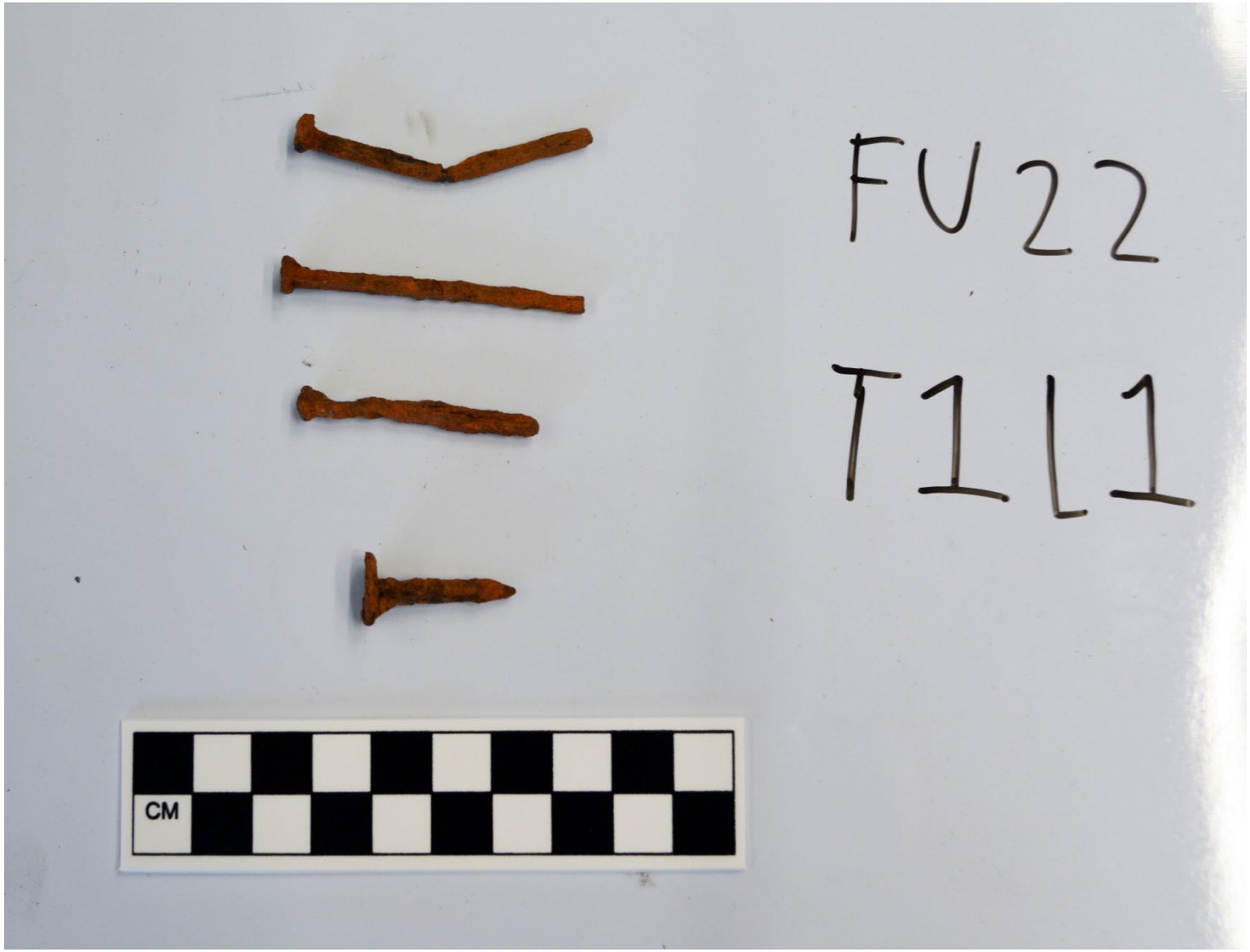
Appendix I: FU22 Artifact Master List

FCN	Object Number	Year	Site	Trench	Locus	Object Type	Material	Color	Length (mm)	Width (mm)	Thickness (mm)	Photo Number
10	1	2022	FU22	2	1	Bottle Glass	Glass		3.971	35.44	3.31	DSC_651-4
10	2	2022	FU22	2	1	Bottle Glass	Glass		56.47	35.84	3.77	DSC_651-4
10	3	2022	FU22	2	1	Bottle Glass	Glass		22.84	8.46	2.93	DSC_651-4
10	4	2022	FU22	2	1	Bottle Glass	Glass		16.79	8.48	2.85	DSC_651-4
10	5	2022	FU22	2	1	Bottle Glass	Glass		8.83	5.9	2	DSC_651-4
10	6	2022	FU22	2	1	Window Glass	Glass		11.96	9.79	2.19	DSC_651-4
10	7	2022	FU22	2	1	Bottle Glass	Glass		17.48	12.38	3.67	DSC_651-4
11	1	2022	FU22	2	1	Nail	Metal	7.5YR 2.5/1	52.01	3.9		DSC_6515
11	2	2022	FU22	2	1	Nail	Metal	5YR 6/8	51.02	3.87		DSC_6515
12	1	2022	FU22	1	1	Window glass	Glass		58	12	2.36	DSC6507-8
12	2	2022	FU22	1	1	Bottle glass	Glass		39.71	29.41	3.73	DSC6509-10
12	3	2022	FU22	1	1	Window glass	Glass		42	15	3.09	DSC6507-8
12	4	2022	FU22	1	1	Bottle glass	Glass		43.47	31.46	4.06	DSC6509-10
12	5	2022	FU22	1	1	Window glass	Glass		29	5	2.19	DSC6507-8
12	6	2022	FU22	1	1	Bottle glass	Glass	2.5YR 7/8	50.24	31.85	4.79	DSC6509-10
12	7	2022	FU22	1	1	Window glass	Glass		17	13	2.37	DSC6507-8
12	8	2022	FU22	1	1	Bottle glass	Glass		19.16	9.31	1.96	DSC6509-10
12	9	2022	FU22	1	1	Window glass	Glass		25	7	2.42	DSC6507-8
12	10	2022	FU22	1	1	Window glass	Glass		17	9	2.38	DSC6507-8
12	11	2022	FU22	1	1	Bottle glass	Glass		21.03	9.25	2.65	DSC6509-10
12	12	2022	FU22	1	1	Bottle glass	Glass		18.34	9.21	2.95	DSC6509-10
13	1	2022	FU22	1	1	Figurine	Plastic?	7.5YR 5/6	40.72	14.61	2.75	DSC6511-12
14	1	2022	FU22	1	1	Nail	Metal	7.5YR 4/4	50.33	2.8		DSC6505-6

14	2	2022	FU22	1	1	Nail	Metal	7.5YR 4/4	41.03	3		DSC6505-6
14	3	2022	FU22	1	1	Nail	Metal	7.5YR 4/4	51.47	3.1		DSC6505-6
14	4	2022	FU22	1	1	Nail	Metal	7.5YR 4/4	26.18	5		DSC6505-6
15	1	2022	FU22	2	1	Champagne Cork	Plastic		33.48	32.93		DSC_6516-7
16	1	2022	FU22	1	2	Bottle glass	Glass		19.9	19.5	1.98	DSC_6538-39
16	2	2022	FU22	1	2	Window glass	Glass		23.4	9.02	2.41	DSC_6538-39
16	3	2022	FU22	1	2	Window glass	Glass		28.8	9.3	2.36	DSC_6538-39
16	4	2022	FU22	1	2	Bottle glass	Glass		16.73	6.72	2.51	DSC_6538-39
16	5	2022	FU22	1	2	Window glass	Glass		31.17	10.38	2.41	DSC_6538-39
16	6	2022	FU22	1	2	Window glass	Glass		24.58	11.3	2.02	DSC_6538-39
16	7	2022	FU22	1	2	Window glass	Glass		20.22	7.14	2.34	DSC_6538-39
16	8	2022	FU22	1	2	Window glass	Glass		18.04	8.34	3.21	DSC_6538-39
16	9	2022	FU22	1	2	Window glass	Glass		52.65	22.45	2.4	DSC_6538-39
16	10	2022	FU22	1	2	Bottle glass	Glass		28.11	17.91	2.82	DSC_6538-39
16	11	2022	FU22	1	2	Window glass	Glass		15.91	5.92	2.4	DSC_6540-41
16	12	2022	FU22	1	2	Window glass	Glass		22.76	16.9	2.37	DSC_6540-41
16	13	2022	FU22	1	2	Window glass	Glass		17.8	4.64	2.37	DSC_6540-41
16	14	2022	FU22	1	2	Window glass	Glass		15.91	5.59	2.71	DSC_6540-41
16	15	2022	FU22	1	2	Window glass	Glass		27.07	14.47	3.12	DSC_6540-41
16	16	2022	FU22	1	2	Window glass	Glass		38.05	9.39	2.45	DSC_6540-41
16	17	2022	FU22	1	2	Window glass	Glass		34.97	24.57	2.36	DSC_6540-41
16	18	2022	FU22	1	2	Window glass	Glass		22.44	10.76	2.05	DSC_6540-41
16	19	2022	FU22	1	2	Unkown	Glass		11.79	9.02	2.95	DSC_6540-41
16	20	2022	FU22	1	2	Unkown	Glass		18.07	12.05	1.53	DSC_6540-41
16	21	2022	FU22	1	2	Window glass	Glass		20.78	8.79	2.34	DSC_6542-43
16	22	2022	FU22	1	2	Window glass	Glass		13.07	8.49	2.35	DSC_6542-43
16	23	2022	FU22	1	2	Window glass	Glass		45.31	23.22	2.41	DSC_6542-43

16	24	2022	FU22	1	2	Window glass	Glass		18.75	13.16	3.13	DSC_6542-43
16	25	2022	FU22	1	2	Bottle glass	Glass		31.94	24.58	2.42	DSC_6542-43
16	26	2022	FU22	1	2	Window glass	Glass		37.46	17.3	2.42	DSC_6542-43
16	27	2022	FU22	1	2	Window glass	Glass		24.61	18.02	2.37	DSC_6542-43
16	28	2022	FU22	1	2	Window glass	Glass		28.4	10.41	3.08	DSC_6542-43
16	29	2022	FU22	1	2	Window glass	Glass		22.17	10.63	2.38	DSC_6542-43
16	30	2022	FU22	1	2	Bottle glass	Glass		15.3	17.02	2.51	DSC_6542-43
16	31	2022	FU22	1	2	Window glass	Glass		19.94	11.83	2.34	DSC_6542-43
16	32	2022	FU22	1	2	Window glass	Glass		21.4	12.1	2.39	DSC_6542-43
17	1	2022	FU22	1	2	Nail	Metal	5YR 5/8	66.71	4.62		DSC_6544
17	2	2022	FU22	1	2	Nail	Metal	5YR 6/8	51.54	3.5		DSC_6544
17	3	2022	FU22	1	2	Nail	Metal	5YR 5/8	50.93	4.48		DSC_6544
17	4	2022	FU22	1	2	Nail	Metal	5YR 4/6	76.36	4.33		DSC_6544
17	5	2022	FU22	1	2	Nail	Metal	5YR 6/8	50.37	4.21		DSC_6544
17	6	2022	FU22	1	2	Nail	Metal	5YR 5/6	48.82	3.61		DSC_6544
17	7	2022	FU22	1	2	Nail	Metal	5YR 5/6	52.28	3.46		DSC_6544
17	8	2022	FU22	1	2	Nail	Metal	5YR 5/6	33.93	2.76		DSC_6544
17	9	2022	FU22	1	2	Nail	Metal	5YR 5/8	56.05	4.02		DSC_6544
17	10	2022	FU22	1	2	Nail	Metal	5YR 5/8	52.18	4.14		DSC_6544
17	11	2022	FU22	1	2	Nail	Metal	5YR 5/8	25.88	2.4		DSC_6544
17	12	2022	FU22	1	2	Nail	Metal	5YR 4/6	23.18	3.5		DSC_6544
17	13	2022	FU22	1	2	Nail	Metal	5YR 4/4	64.85	3.8		DSC_6544
17	14	2022	FU22	1	2	Nail	Metal	5YR 5/6	63.76	3.74		DSC_6544
17	15	2022	FU22	1	2	Nail	Metal	5YR 4/6	65.75	4.35		DSC_6544
17	16	2022	FU22	1	2	Nail	Metal	5YR 4/6	51.06	4.06		DSC_6544
17	17	2022	FU22	1	2	Nail	Metal	5YR 5/6	51.02	4.36		DSC_6663
17	18	2022	FU22	1	2	Nail	Metal	5YR 5/8	54.07	3.97		DSC_6663
17	19	2022	FU22	1	2	Nail	Metal	5YR 5/8	50.76	3.95		DSC_6663
17	20	2022	FU22	1	2	Nail	Metal	5YR 6/8	50.25	4.29		DSC_6663
17	21	2022	FU22	1	2	Nail	Metal	5YR 5/6	50.19	3.62		DSC_6663

17	22	2022	FU22	1	2	Nail	Metal	5YR 5/8	50.37	4.22		DSC_6663
17	23	2022	FU22	1	2	Nail	Metal	5YR 5/6	46.43	3.17		DSC_6663
17	24	2022	FU22	1	2	Nail	Metal	5YR 6/8	44.2	3.28		DSC_6663
17	25	2022	FU22	1	2	Nail	Metal	5YR 5/6	63.56	2.56		DSC_6663
17	26	2022	FU22	1	2	Nail	Metal	5YR 5/6	38.07	3.04		DSC_6663
17	27	2022	FU22	1	2	Nail	Metal	5YR 5/8	49.04	3.25		DSC_6663
17	28	2022	FU22	1	2	Nail	Metal	5YR 5/6	43.87	3.5		DSC_6663
17	29	2022	FU22	1	2	Nail	Metal	5YR 5/6	41.21	4.11		DSC_6663
17	30	2022	FU22	1	2	Nail	Metal	5YR 5/8	37.3	3.84		DSC_6663
17	31	2022	FU22	1	2	Nail	Metal	5YR 5/6	40.29	2.59		DSC_6663
17	32	2022	FU22	1	2	Nail	Metal	5YR 5/8	33.01	2.93		DSC_6663
17	33	2022	FU22	1	2	Nail	Metal	5YR 5/8	15.61	4.15		DSC_6663
17	34	2022	FU22	1	2	Nail	Metal	5YR 5/8	26.27	33.3		DSC_6663
17	35	2022	FU22	1	2	Nail	Metal	5YR 5/8	27.84	3.19		DSC_6663
17	36	2022	FU22	1	2	Nail	Metal	5YR 5/6	33.96	3.86		DSC_6663
17	37	2022	FU22	1	2	Nail	Metal	5YR 5/6	27	3.17		DSC_6663
17	38	2022	FU22	1	2	Nail	Metal	5YR 5/8	20.27	5.16		DSC_6663
18	1	2022	FU22	2	2	Brick	Brick					
19	1	2022	FU22	2	2	Nail	Metal	5YR 5/6	34.55	3.73		DSC_6664
20	1	2022	FU22	2	3	Bottle glass	Glass		41.35	24.82	3.83	DSC_6667
20	2	2022	FU22	2	3	Bottle glass	Glass		17.24	18.88	3.02	DSC_6667
20	3	2022	FU22	2	3	Window glass	Glass		22.23	10.48	1.79	DSC_6667
20	4	2022	FU22	2	3	Bottle glass	Glass		10.93	9.88	5.85	DSC_6667
20	5	2022	FU22	2	3	Milk glass	Glass		14.42	17.59	3.2	DSC_6667
21	1	2022	FU22	2	3	Nail	Metal	5YR 5/6	44.29	4.02		DSC_6666
21	2	2022	FU22	2	3	Object	Metal	7.5YR 6/6	12.33	8.24	2.08	DSC_6666
21	3	2022	FU22	2	3	Object	Metal	5YR 4/6	81.66	55.82	7.06	DSC_6666


FU22
T1L1
CM


01
05
07
09
03
10
CM
FU22
T1L1

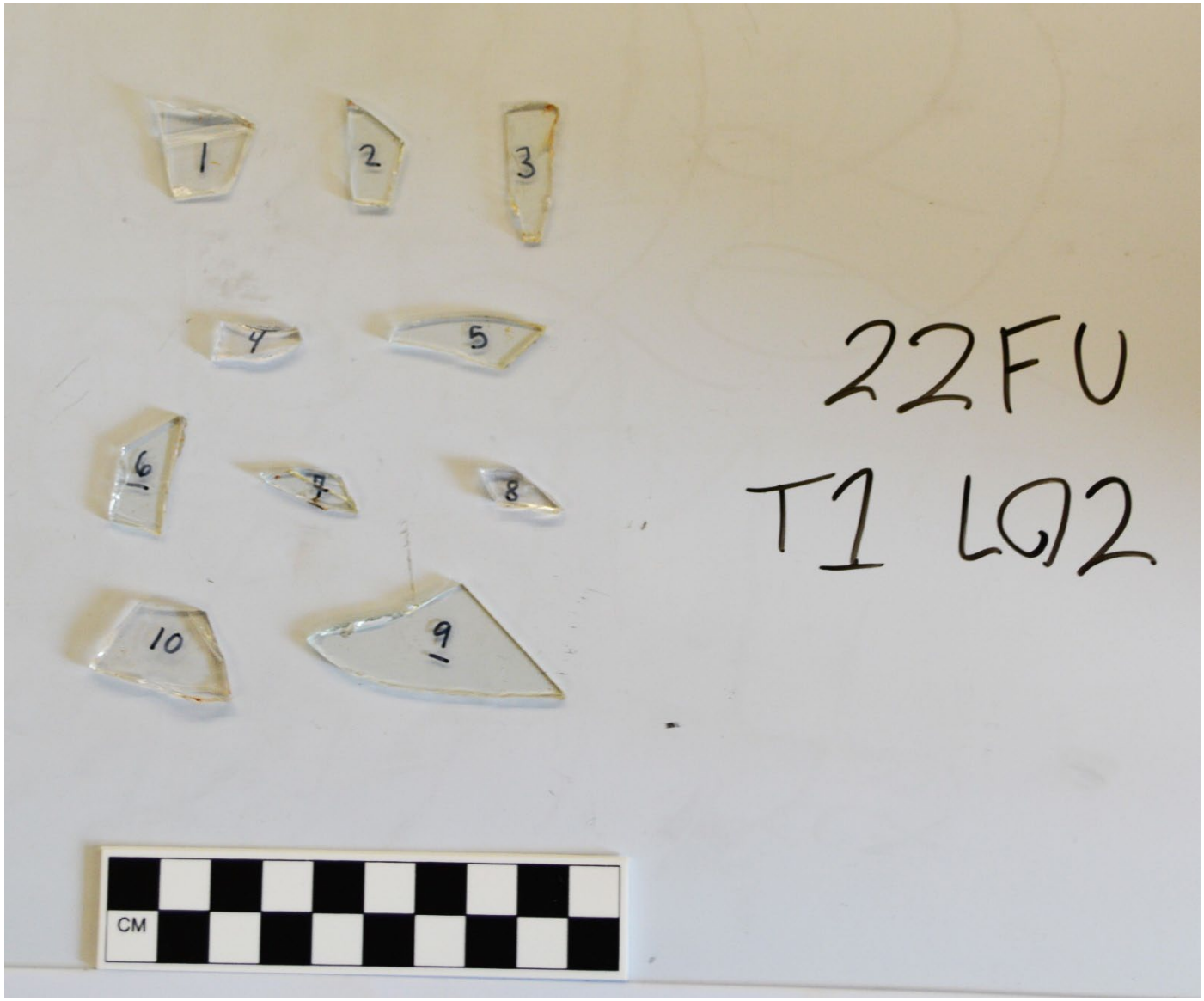

02
11
12
08
06
04
CM
FU22
T1L1

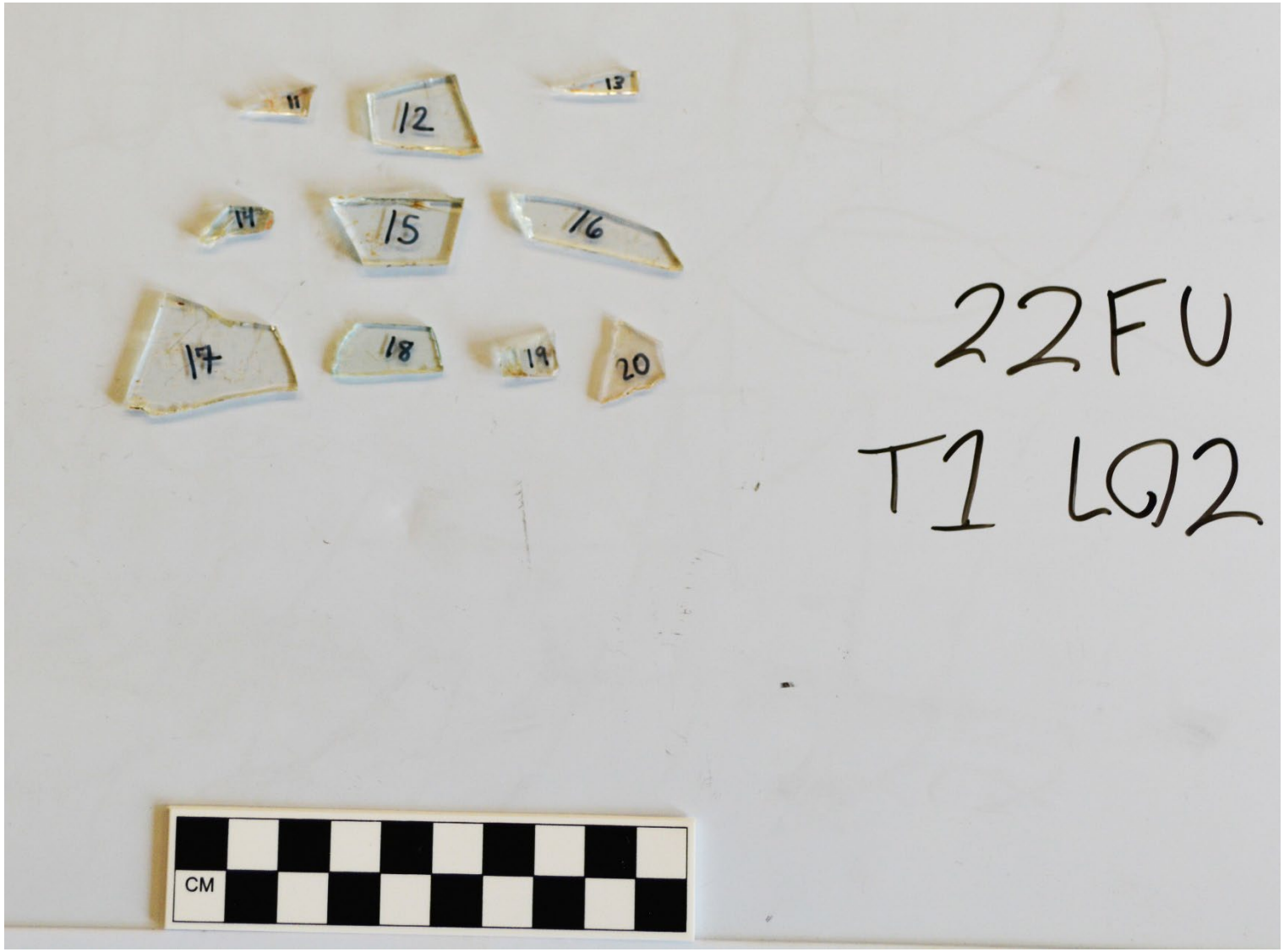

CM
FU22
T1L1

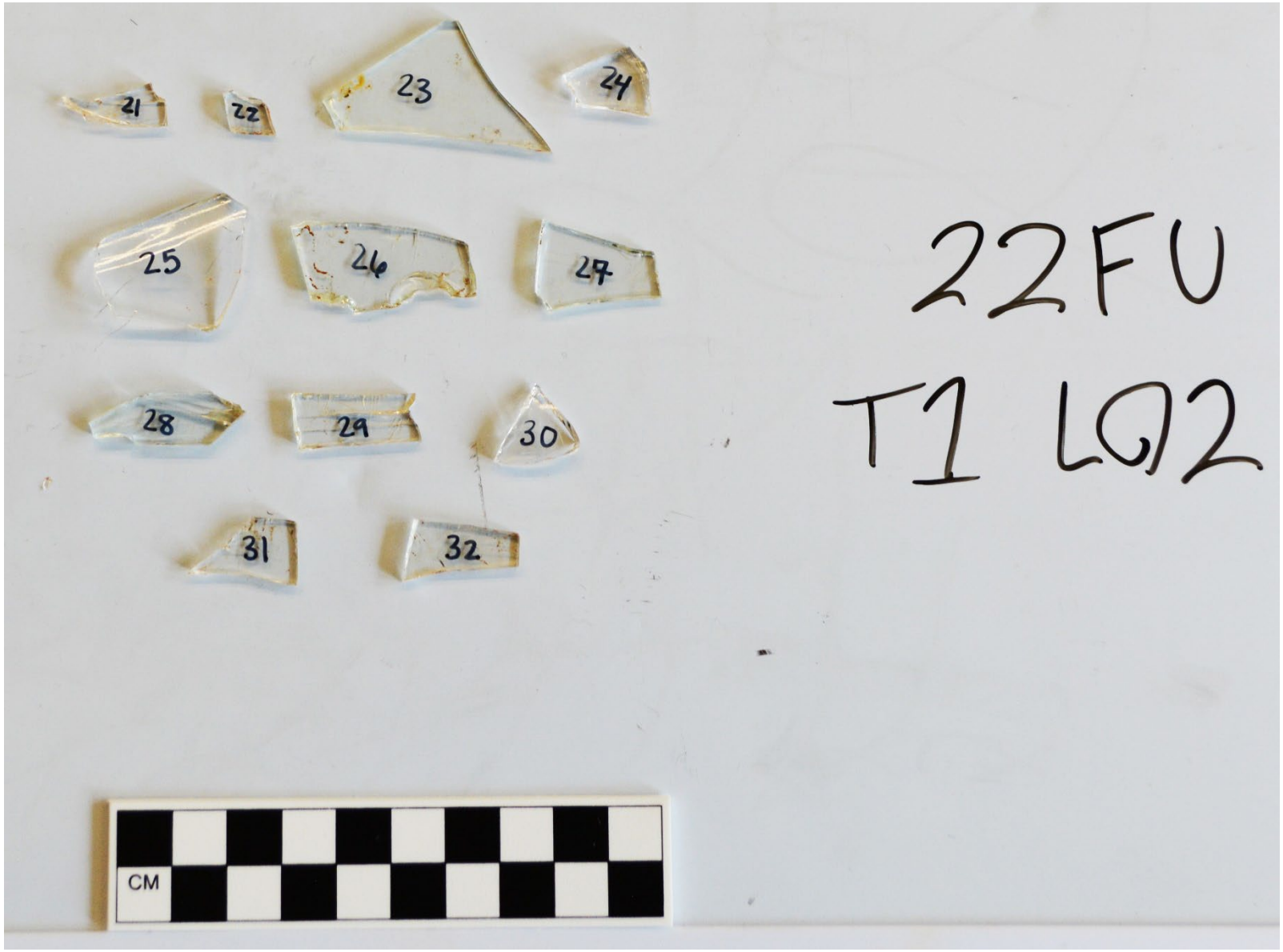

22FU T2
L01
CM


22FU T2
L01
CM

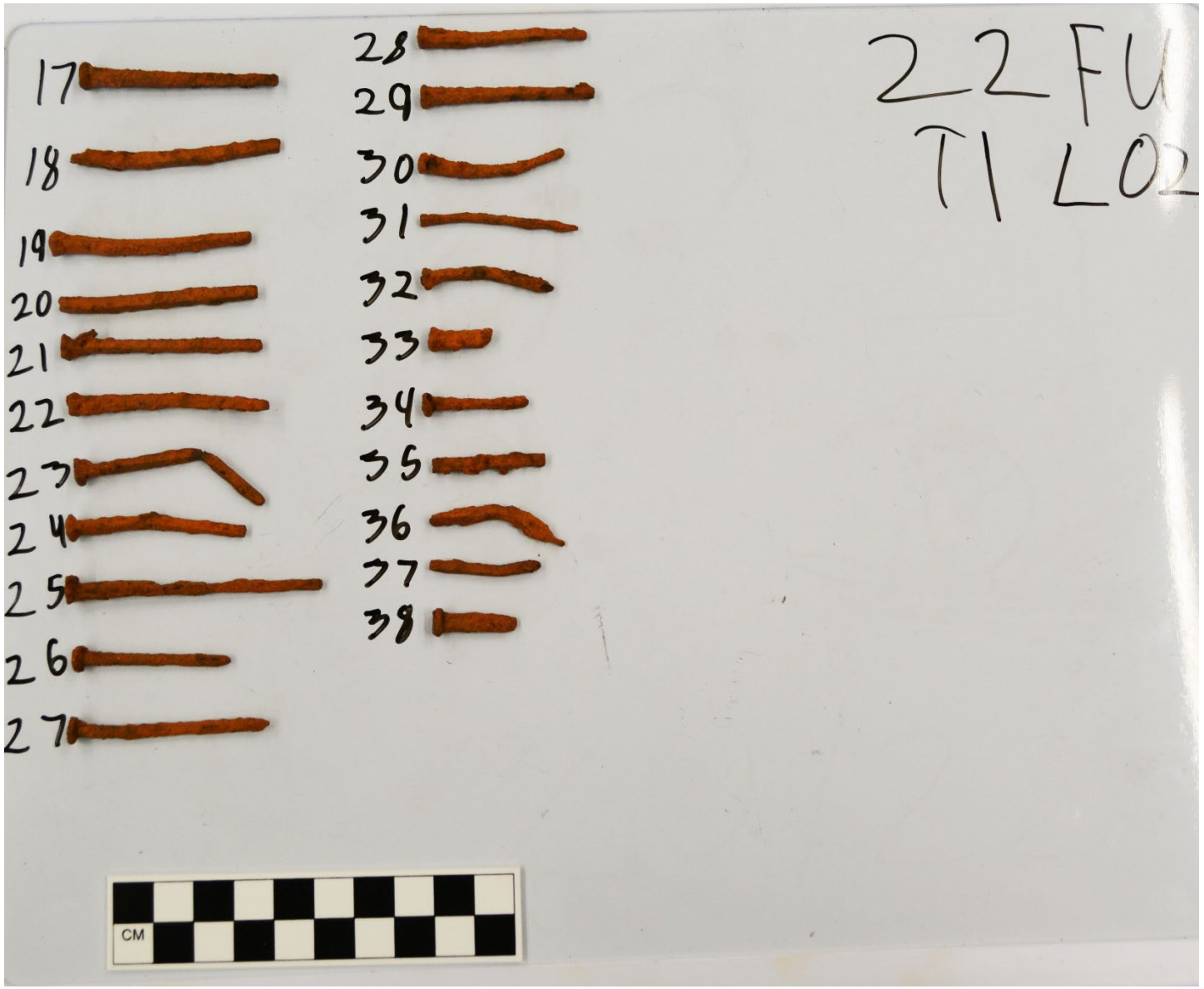

22FU T2
L01
CM

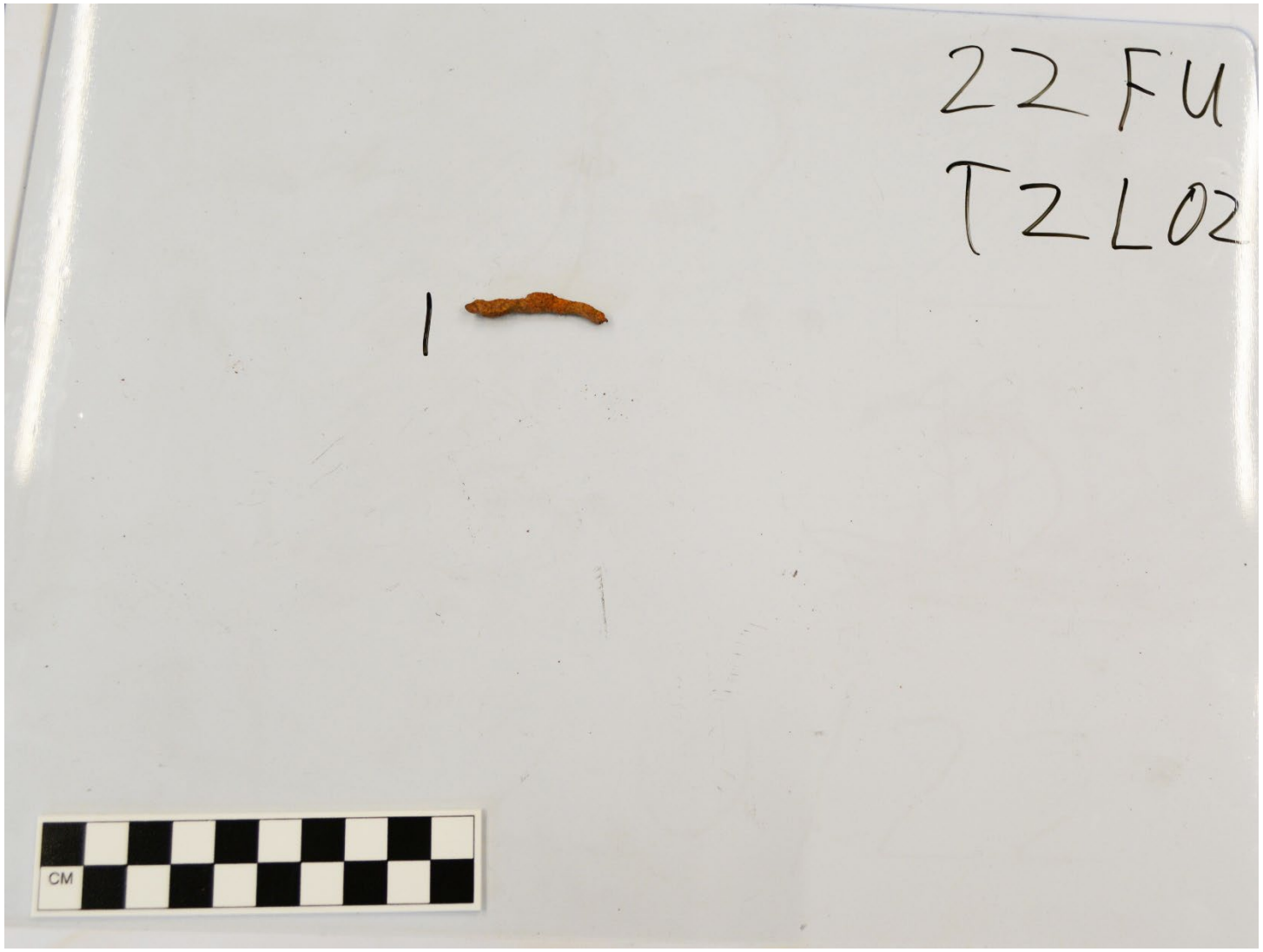

1
2
3
4
5
6
7
8
9
10
22FU
T1 L02
CM


11
12
13
14
15
16
17
18
19
20
22FU
T1 L02
CM


21
22
23
24
25
26
27
28
29
30
31
32
22FU
T1 L02
CM


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
22FV
T1 L02
CM


17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
22 FU
T1 L02
CM

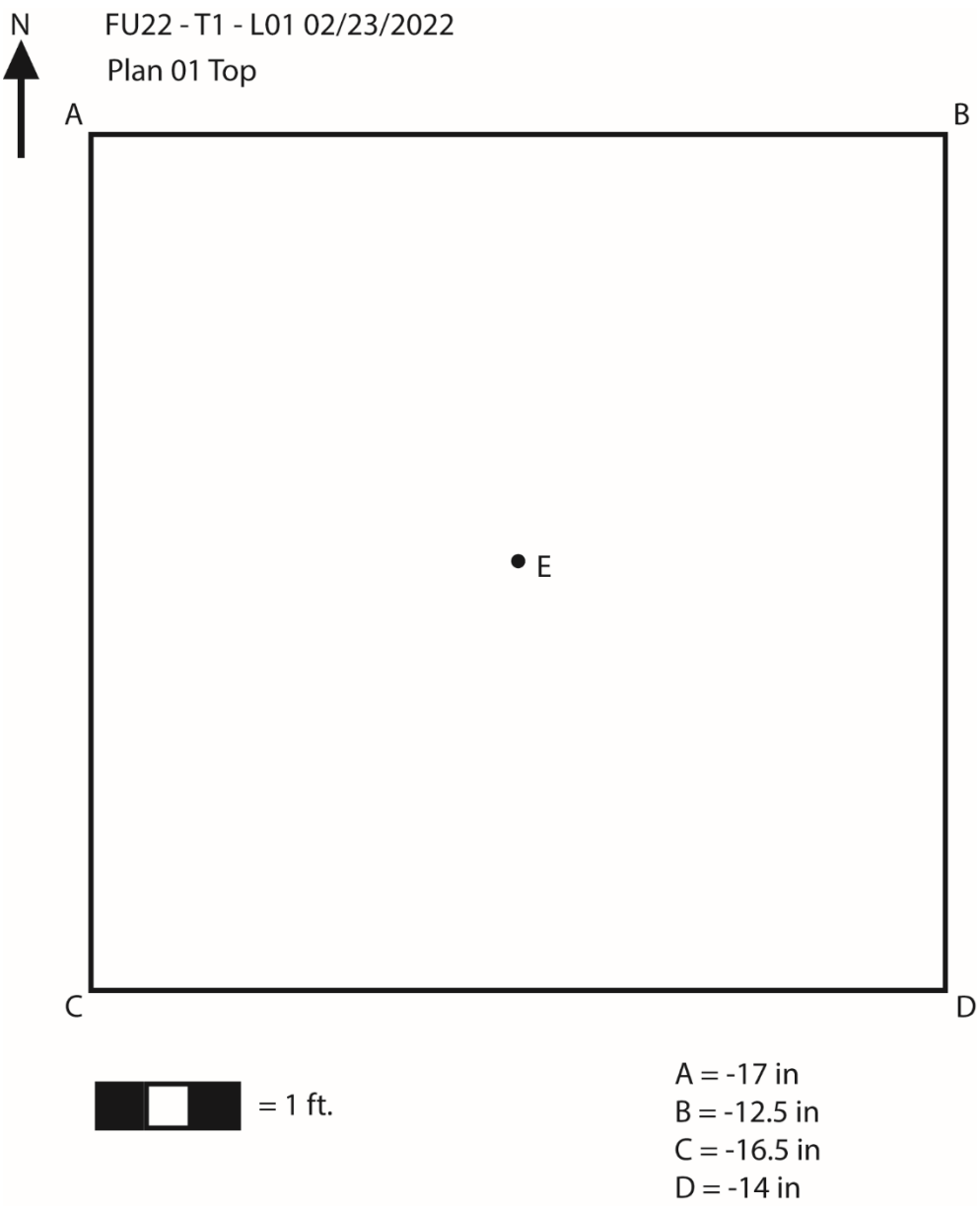

22 FU
T2 L02
1
CM


22 FU
T2 L03
1
2
3
CM

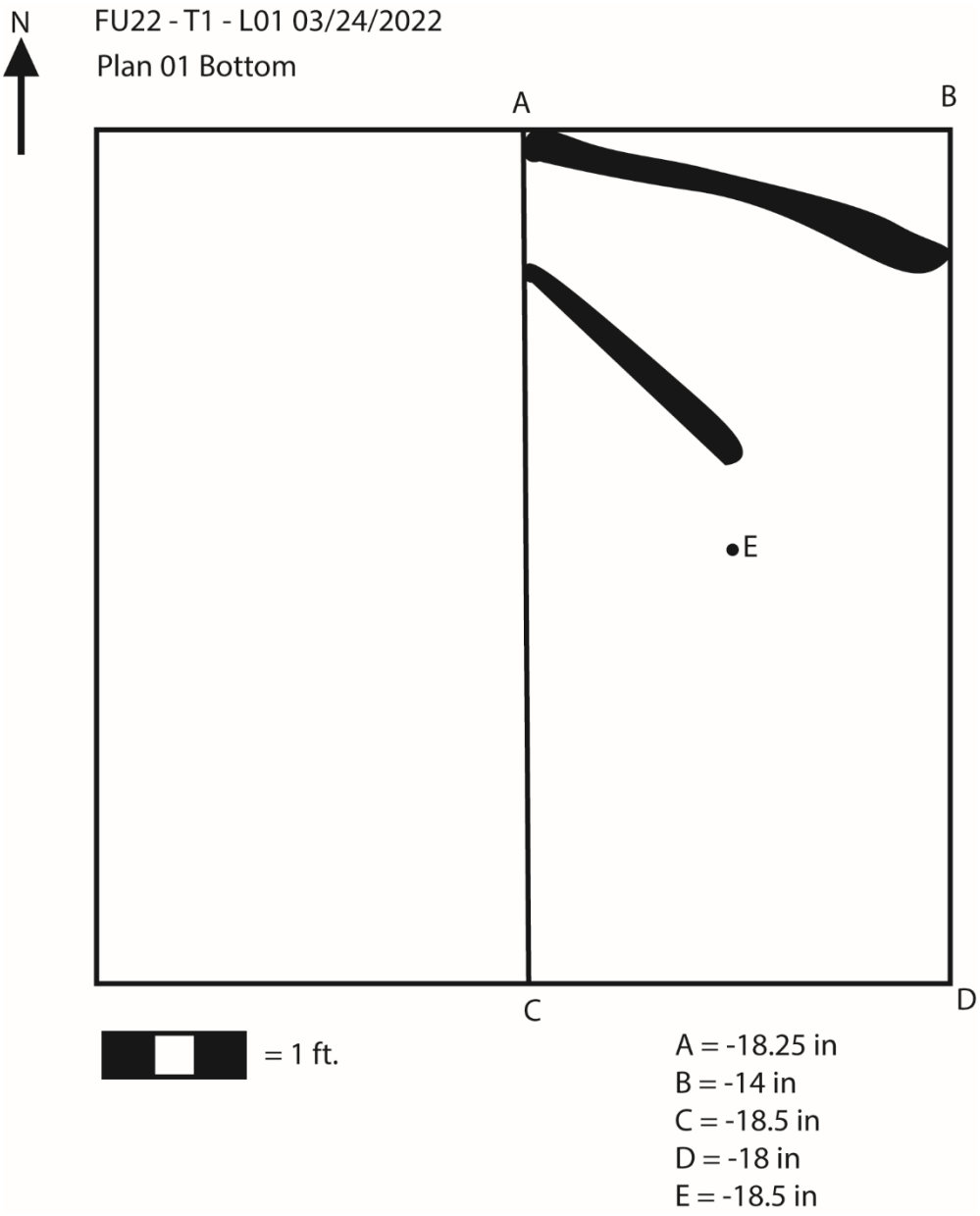

22 FU
T2 L03
1
3
5
4
CM

Appendix II. FU22 Excavation Drawings

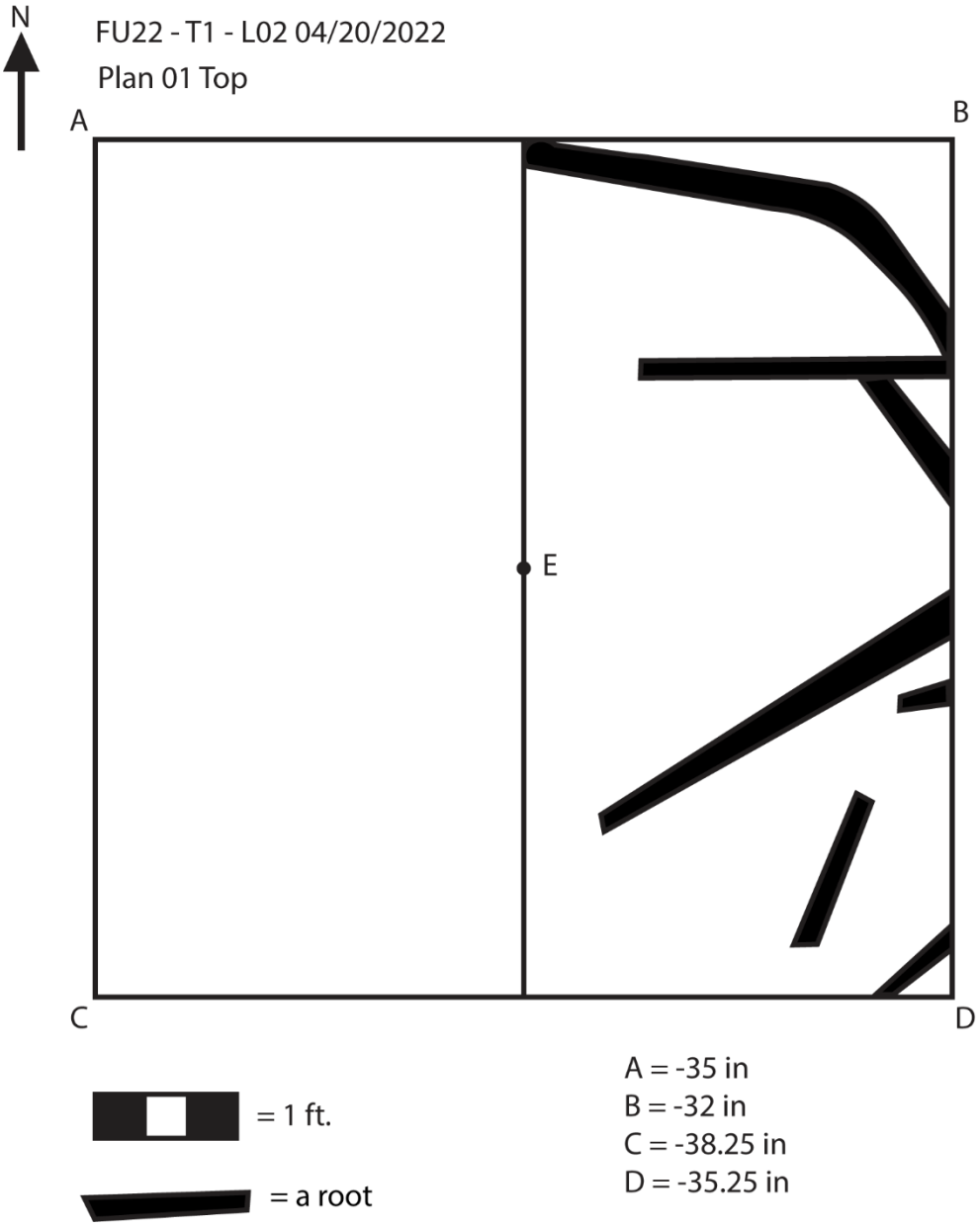
FU22 Trench 1



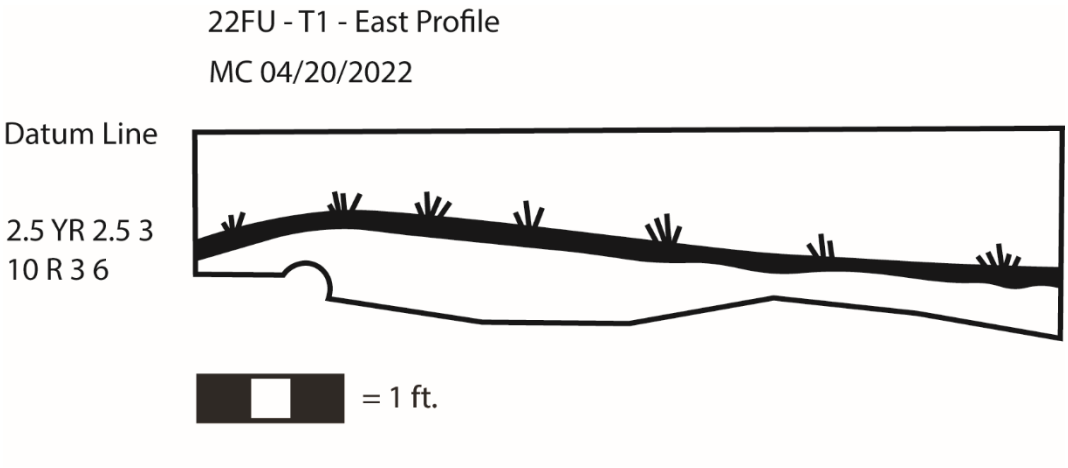
T1 L1 Top


N
FU22 - T1 - L01 03/24/2022
Plan 01 Bottom
A
B
E
C
D
= 1 ft.
A = -18.25 in
B = -14 in
C = -18.5 in
D = -18 in
E = -18.5 in

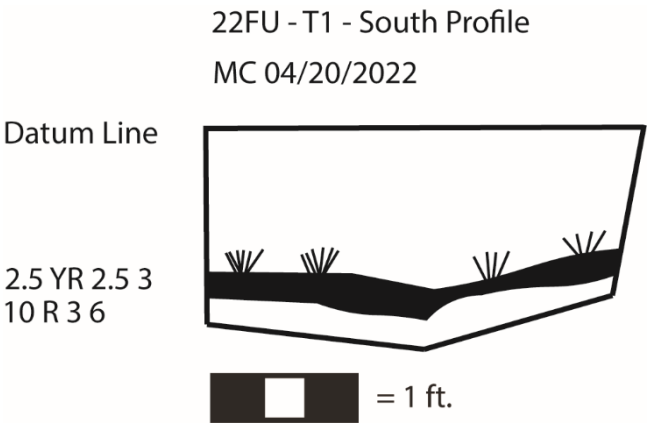
T1 L1 Bottom


N
FU22 - T1 - L02 04/20/2022
Plan 01 Top
A
B
E
C
D
= 1 ft.
= a root
A = -35 in
B = -32 in
C = -38.25 in
D = -35.25 in

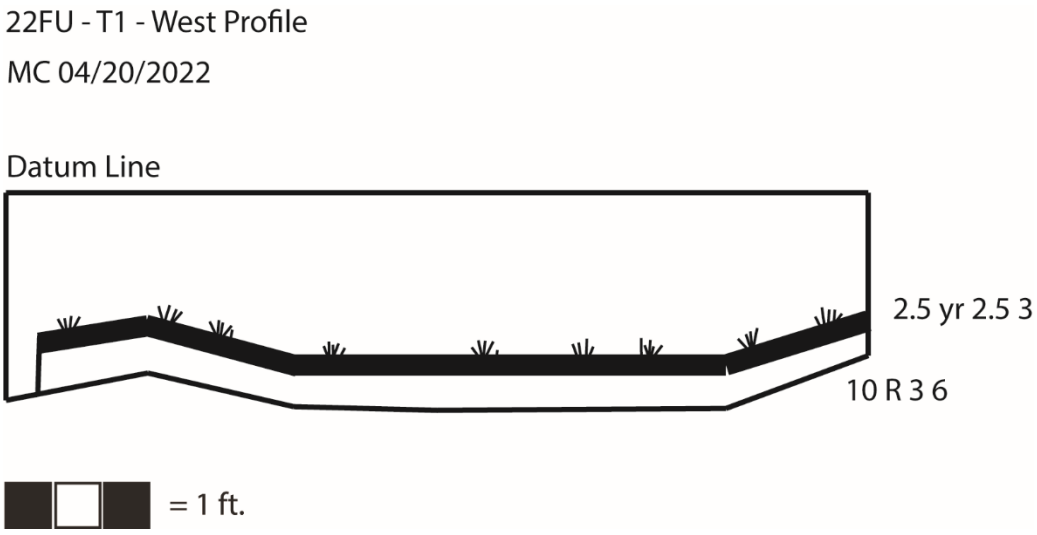
T1 L2



T1 East Profile

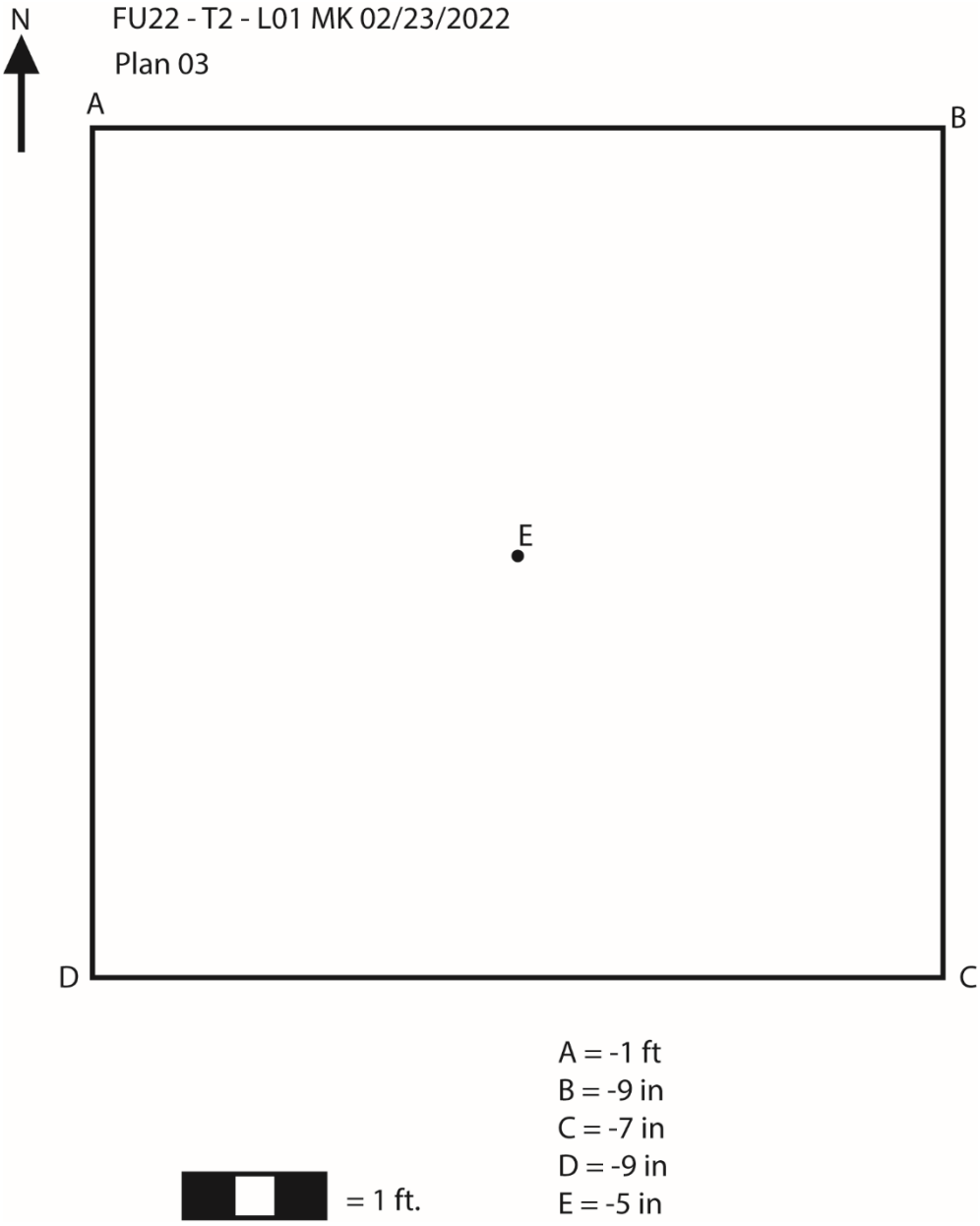


T1 South Profile

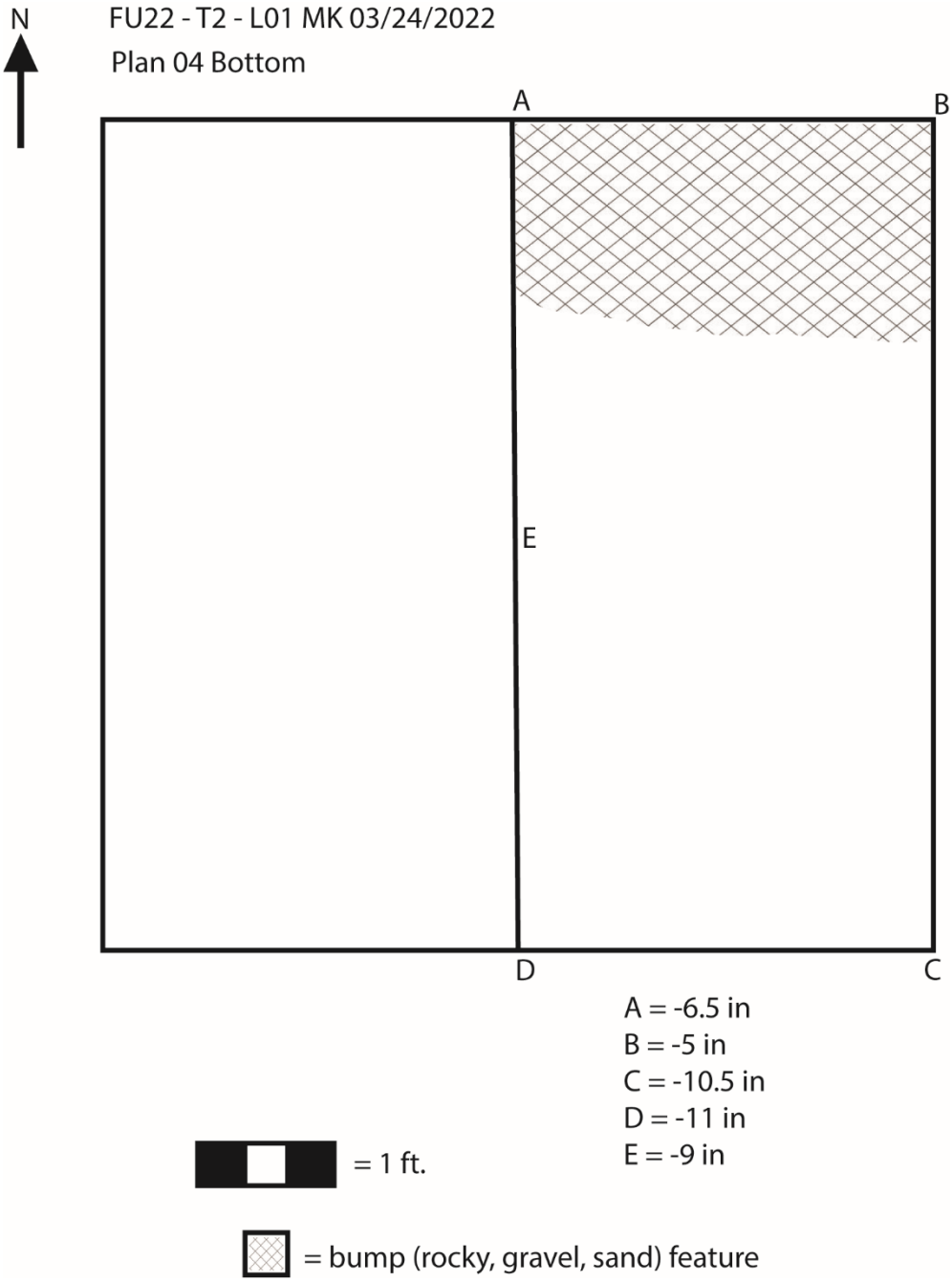


T1 West Profile

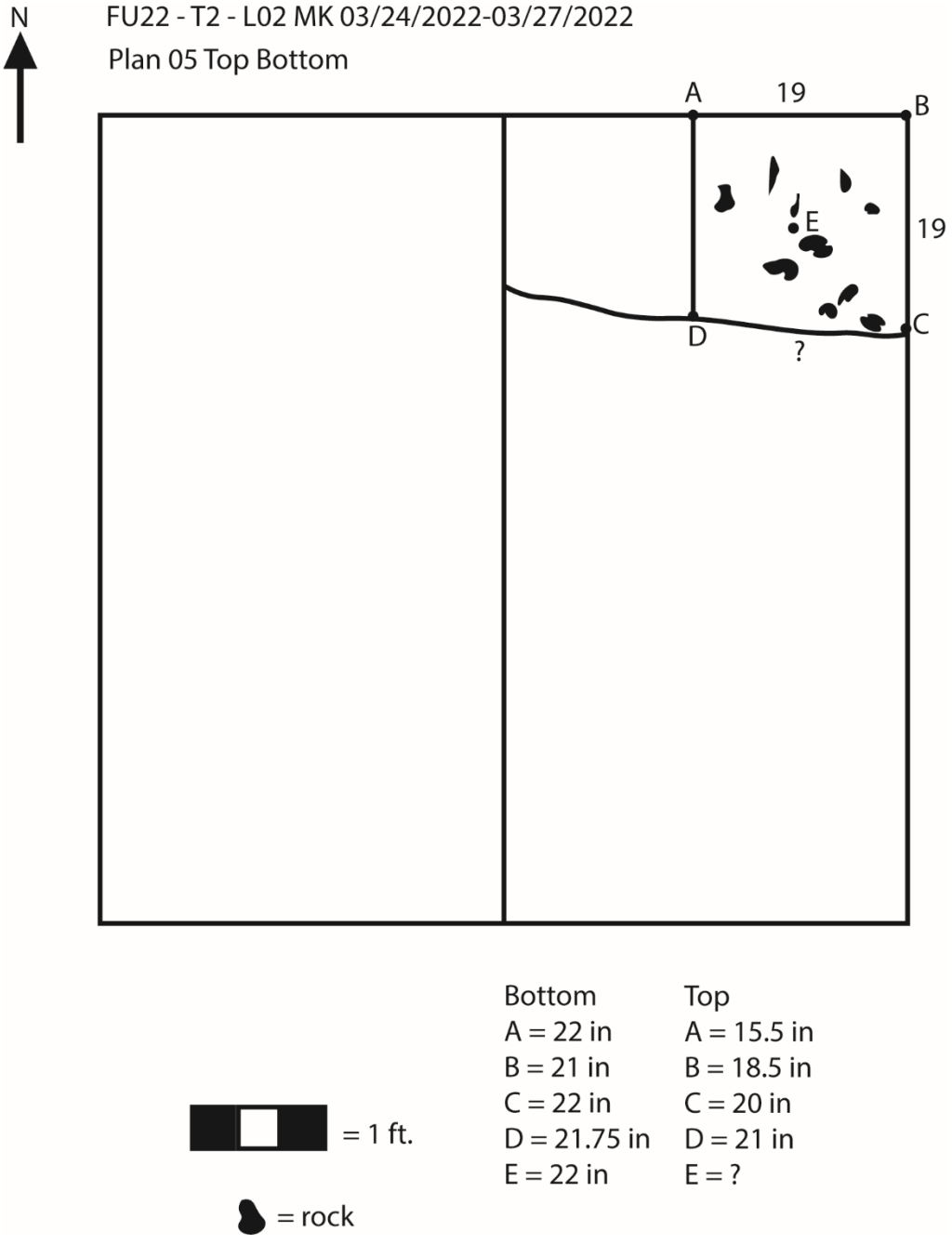
FU22 Trench 2



T2 L1 Top

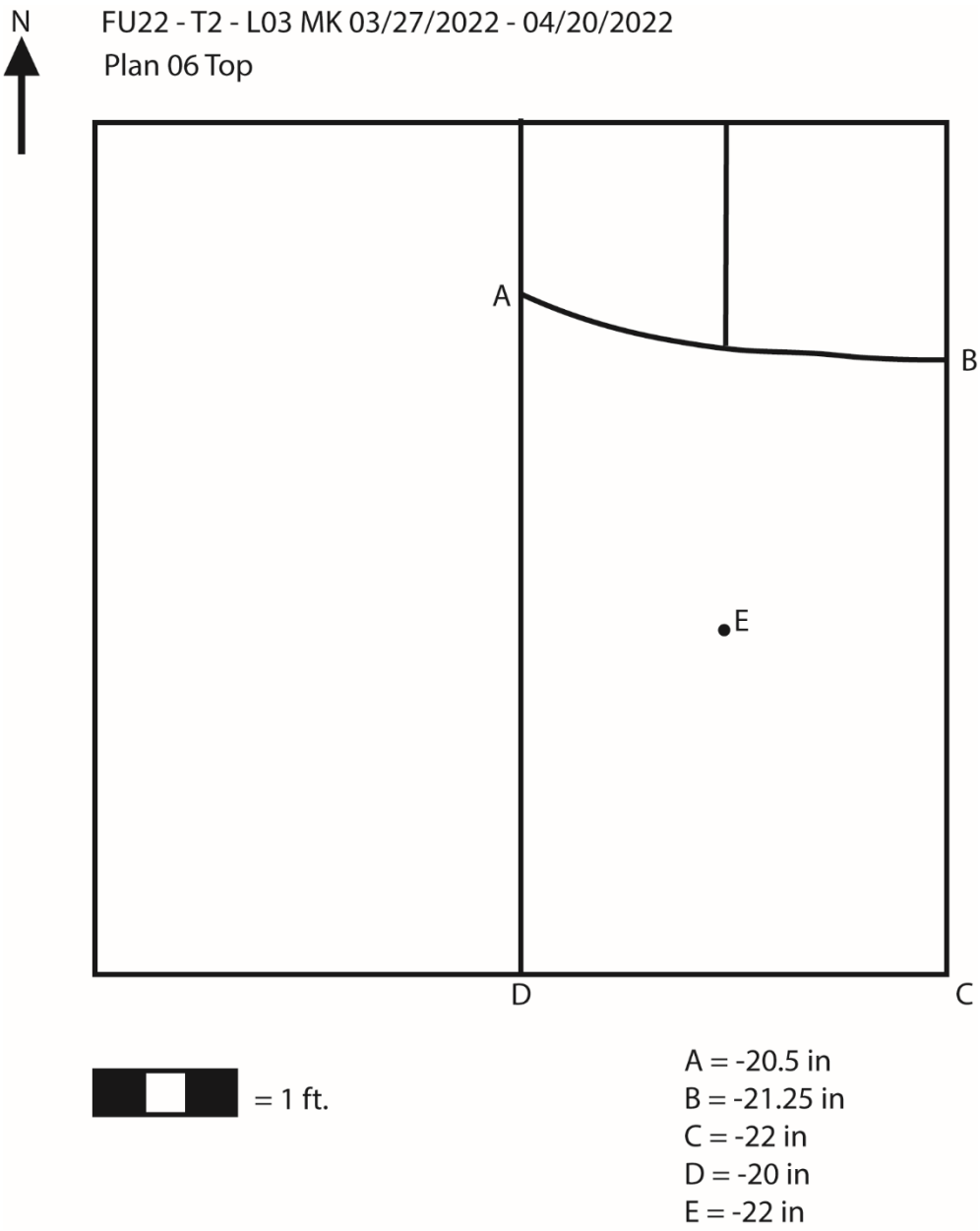

N
FU22 - T2 - L01 MK 03/24/2022
Plan 04 Bottom
A
B
E
D
C
A = -6.5 in
B = -5 in
C = -10.5 in
D = -11 in
E = -9 in
= 1 ft.
= bump (rocky, gravel, sand) feature

T2 L1 Bottom

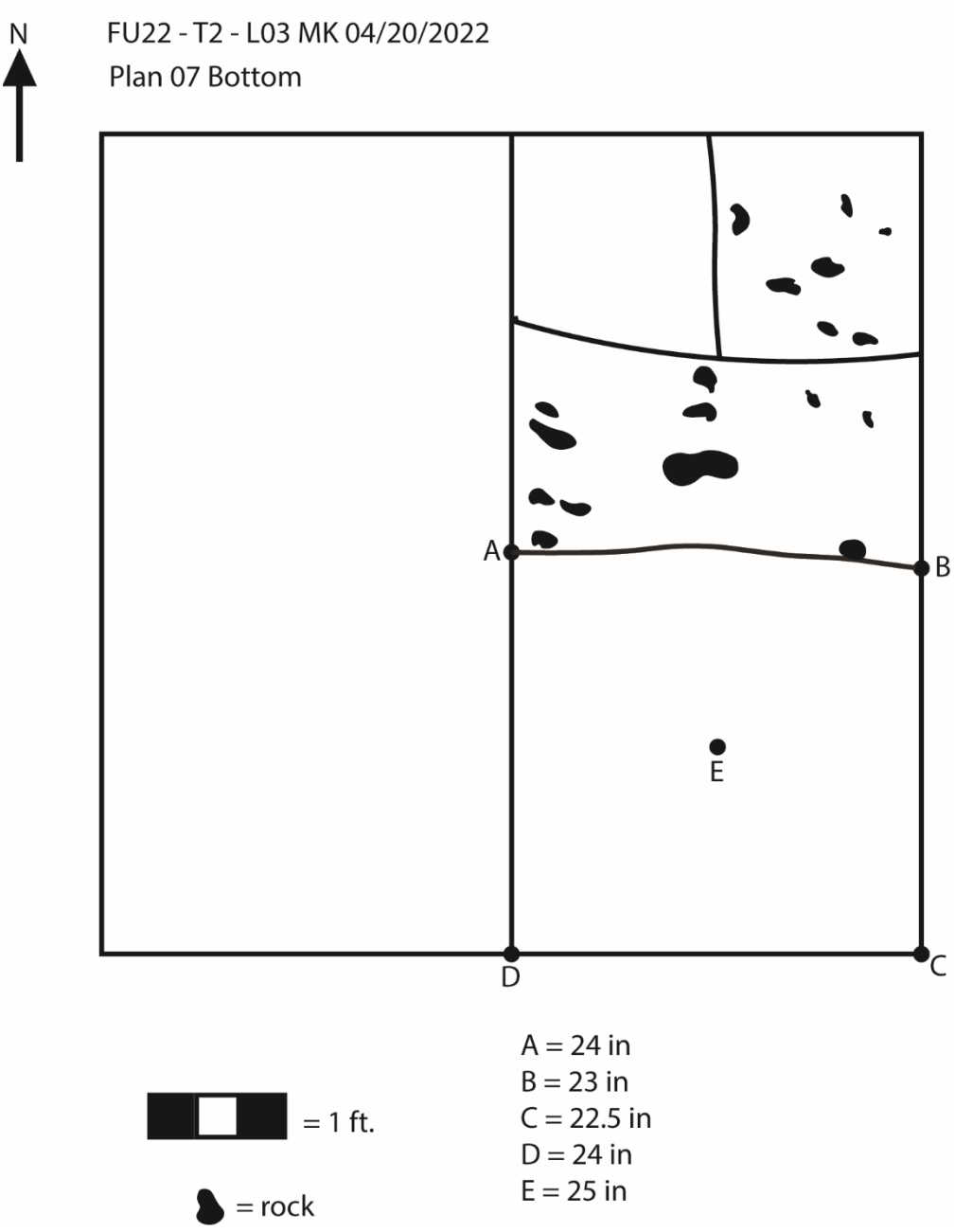


	Bottom	Top
A	22 in	15.5 in
B	21 in	18.5 in
C	22 in	20 in
D	21.75 in	21 in
E	22 in	?

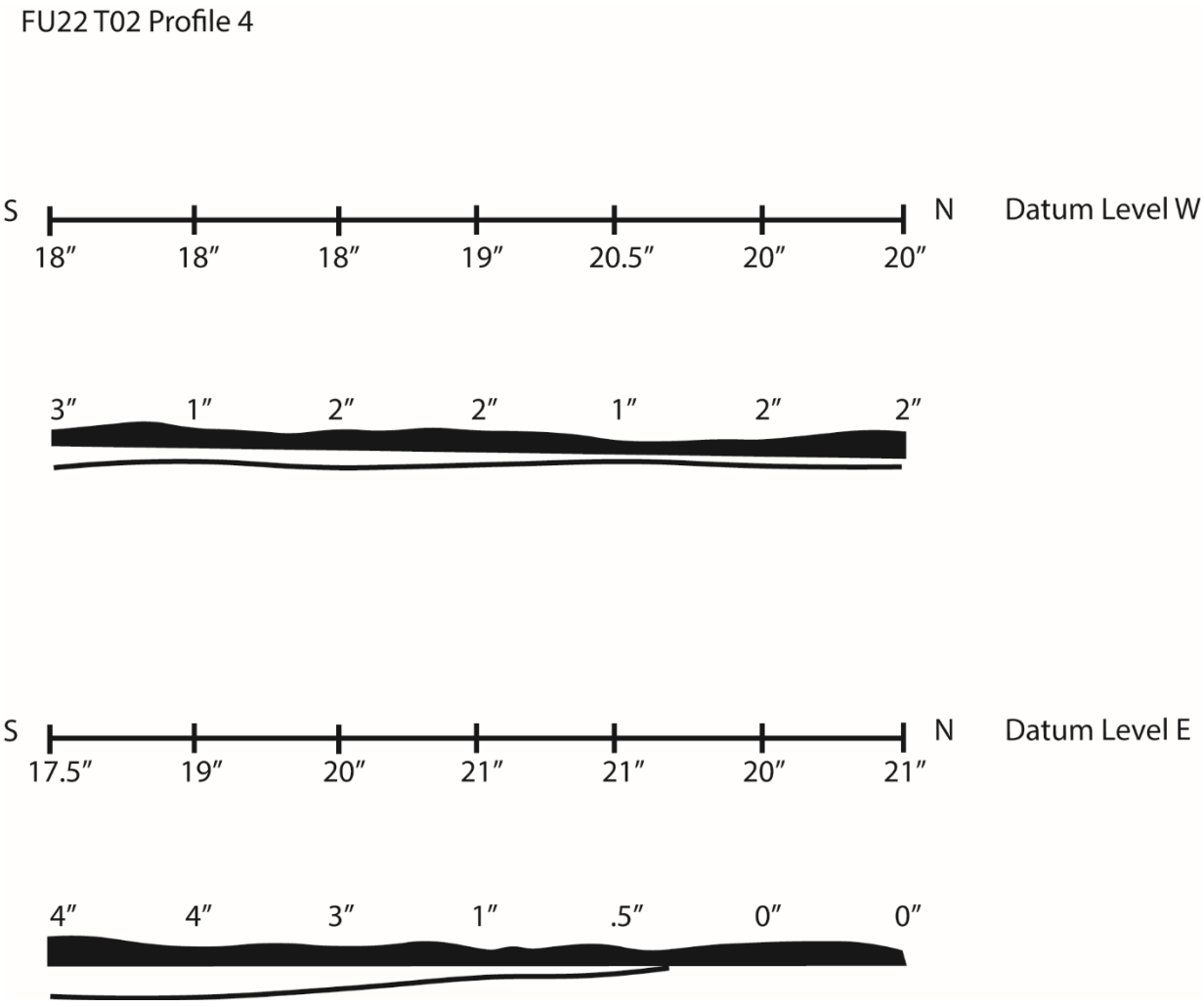
T2 L2


N
FU22 - T2 - L03 MK 03/27/2022 - 04/20/2022
Plan 06 Top
A
B
E
D
C
= 1 ft.
A = -20.5 in
B = -21.25 in
C = -22 in
D = -20 in
E = -22 in

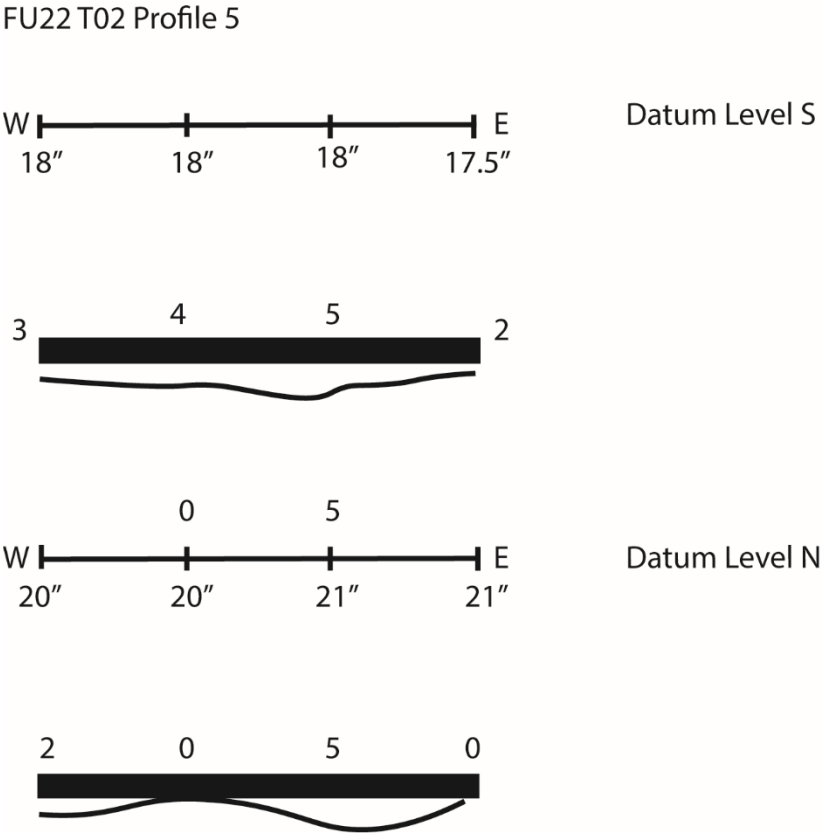
T2 L3a


N
FU22 - T2 - L03 MK 04/20/2022
Plan 07 Bottom
A
B
C
D
E
= 1 ft.
= rock
A = 24 in
B = 23 in
C = 22.5 in
D = 24 in
E = 25 in

T2 L3b



T2 West Profile (top) and East Profile (bottom)

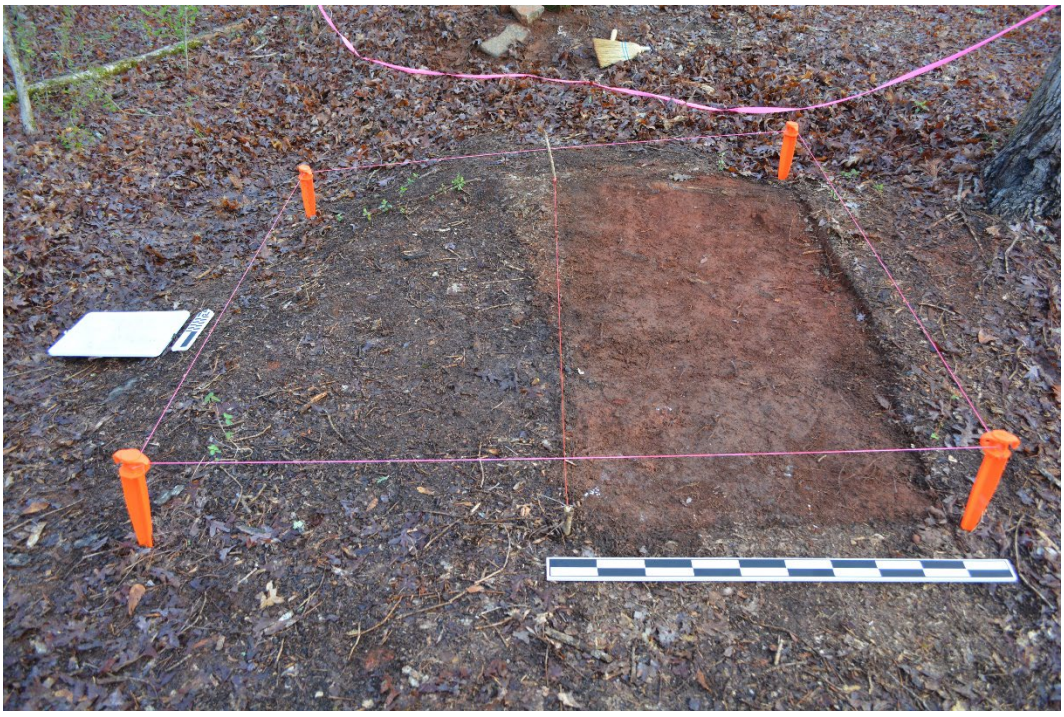


T2 South Profile (top) and North Profile (bottom)

Appendix III. FU22 Excavation Photos

T1 Excavation Photos

T1 L1 Top, facing north.



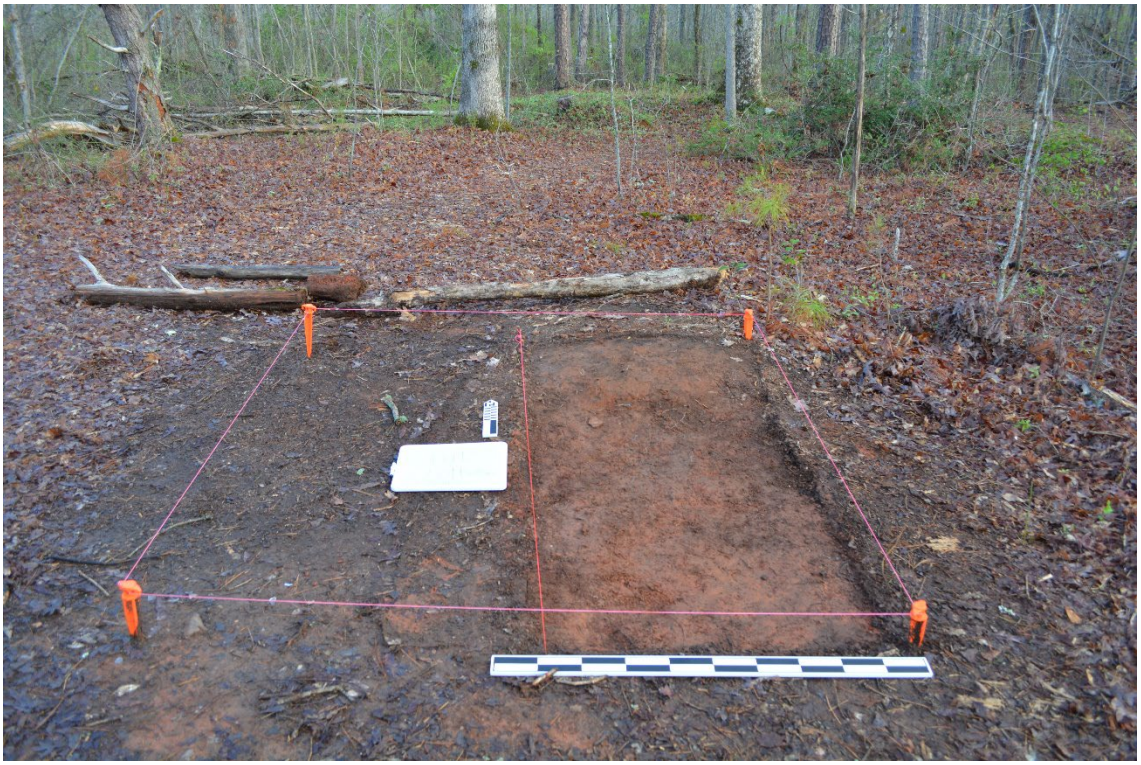
T1 L1 Bottom, facing north.

T1 L2 Bottom, facing north.

T1 L2 Bottom, facing east.

T2 Excavation Photos

T2 L1 Top facing north.



T2 L1 Bottom facing north.

T2 L2 Bottom facing north.

T2 L2 Bottom facing east.