MINIMUM CRITERIA DETERMINATION CHECKLIST

The following questions provide direction in determining when the Department is required to prepare environmental documents for state-funded construction and maintenance activities. Answer questions for Parts A through C by checking either "Yes" or "No". Complete Part D of the checklist when Minimum Criteria Rule categories #8, 12(i) or #15 are used.

TIP Project No.: BR-0033

State Project No.: 67033.1.1

Project Location: Existing Bridge #580084 on SR 1234 (Parker Padgett Rd) over I-40 in McDowell County, North Carolina.

Project Description: The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge #580084 on SR 1234 (Parker Padgett Rd) over I-40 in McDowell County, North Carolina.

The total project length is approximately 825 feet, with a variable existing right-of-way width at a minimum of 60 feet. Bridge #580084 is currently 233 feet long. The bridge was built in 1958 and is structurally deficient with a sufficiency rating of 51.39. The replacement bridge will be a steel structure approximately 209 feet long.

Additional right-of-way and easement is required. SR 1234 (Parker Padgett Rd) will provide two 12-foot travel lanes. The roadway will be designed as a Local Road using Regional Tier Guidelines with a 25 mph design speed.

The bridge will replaced in a new location using the existing bridge as an on-site detour.

Anticipated Permit or Consultation Requirements: No permits are anticipated for this project.

Special Project Information:

Traffic. ADT 2021 = 2,410 VPD. ADT 2041 = 3,140 VPD. STIP BR-0033, as depicted in preliminary plans, will meet 2041 traffic needs.

Crash Data. There were 19 crashes reported in the vicinity of Bridge #580084 for the period from 9/1/2008 to 8/31/2018. No fatalities occurred. Three crashes included injuries, and 16 crashes had property damage. Eight of the accidents were related to turning movements.

Pedestrian and Bicycle Accommodations. There are no pedestrian or bicycle accommodations associated with this project.

Detour. This project investigated using both an on-site detour and an off-site detour. The on-site detour was ultimately chosen for the project as the costs were similar between the two options, but the off-site detour option was approximately 6 miles in length for the northern and southern detour and would cause a delay in traffic during construction.

Cost. Utility cost estimate: $26,620. Right-of-way cost estimate: $28,101. Construction cost estimate: $3,350,000. Total cost estimate: $3,404,721.

PART A: MINIMUM CRITERIA

Item 1 to be completed by the Engineer.	YES	NO
1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is not required?	☒	☐

If the answer to number 1 is "no", then the project does not qualify as a minimum criteria project. A state environmental assessment is required.

If yes, under which category? (9) Reconstruction of existing crossroad or railroad separations and existing stream crossings, including, but not limited to, pipes, culverts, and bridges.

If either category #8, #12(i) or #15 is used complete Part D of this checklist.

PART B: MINIMUM CRITERIA EXCEPTIONS

Items 2 – 4 to be completed by the Engineer.	YES	NO
2. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts?	☐	☒
3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment?	☐	☒
4. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the Department?	☐	☒
Item 5-8 to be completed by Division Environmental Officer.		
5. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value?	☐	☒
6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list?	☐	☒
7. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or ground water impacts?	☐	☒

	YES	NO
8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits or shellfish, finfish, wildlife, or their natural habitats	☐	☒

If any questions 2 through 8 are answered "yes", the proposed project may not qualify as a Minimum Criteria project. A state environmental assessment (EA) may be required. For assistance, contact:

Manager, Environmental Analysis Unit
1598 Mail Service Center
Raleigh, NC 27699-1598
(919) 707 – 6000
Fax: (919) 212-5785

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

Items 9- 12 to be completed by Division Environmental Officer.	YES	NO
9. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action?	☐	☒
10. Does the action require the placement of temporary or permanent fill in waters of the United States?	☐	☒
11. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs?	☐	☒
12. Is the proposed action located in an Area of Environmental Concern, as defined in the coastal Area Management Act?	☐	☒
Items 13 – 15 to be completed by the Engineer.		
13. Does the project require stream relocation or channel changes?	☐	☒
Cultural Resources		
14. Will the project have an "effect" on a property or site listed on the National Register of Historic Places?	☐	☒
15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas?	☐	☒

Questions in Part "C" are designed to assist the Engineer and the Division Environmental Officer in determining whether a permit or consultation with a state or federal resource agency may be required. If any questions in Part "C" are answered "yes", follow the appropriate permitting procedures prior to beginning project construction.

PART D:(To be completed when either category #8, 12(i) or #15 of the rules are used.)

Items 16- 22 to be completed by Division Environmental Officer.

16. Project length: _____

17. Right of Way width: _____

18. Project completion date: _____

19. Total acres of newly disturbed ground surface: _____

20. Total acres of wetland impacts: _____

21. Total linear feet of stream impacts: _____

22. Project purpose: _____

If Part D of the checklist is completed, send a copy of the entire checklist document to:

David B. Harris, PE
State Roadside Environmental Engineer
Mail Service Center 1557
Raleigh, NC 27699-1557
(919) 707-2920
Fax: (919) 715-2554
Email: davidharris@ncdot.gov

Reviewed by: DocuSigned by: Kevin Fischer ED19A18D98EC496... Date: 4/15/2019

Kevin Fischer, PE, Structures Management Unit, NCDOT

Date: **4/8/2019**

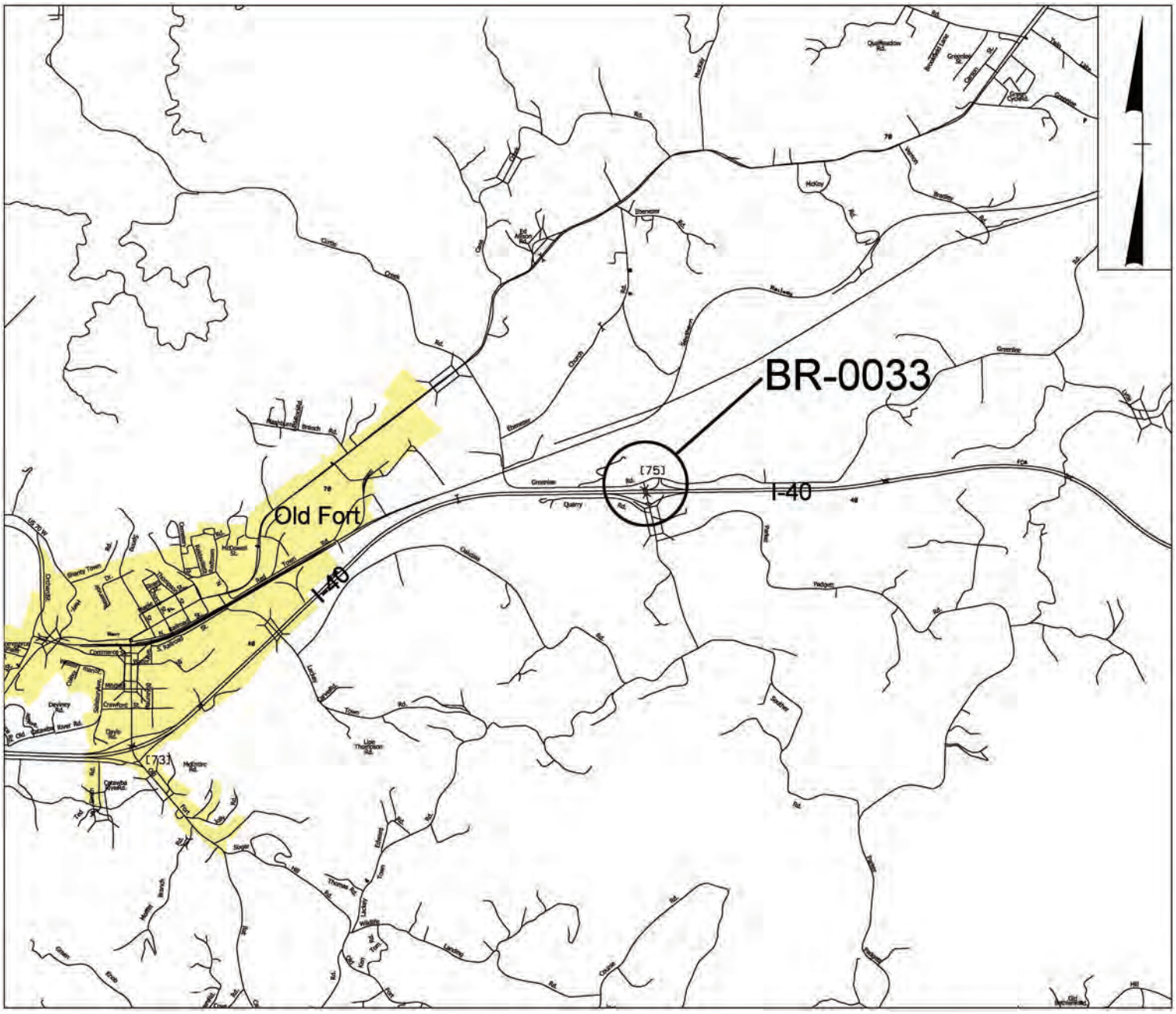
Scott Shifflett, Environmental Project Manager, ATCS, PLC

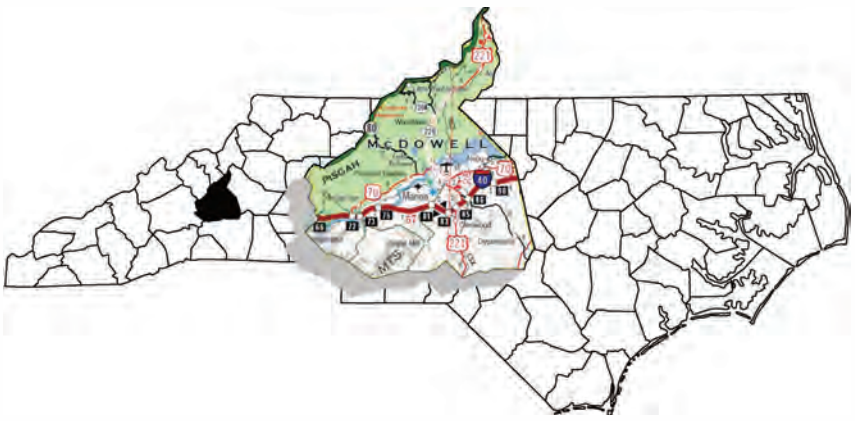
Project Commitments

McDowell County
Replacement of Bridge #580084 on SR 1234 (Parker Padgett Rd) over I-40
WBS # 67033.1.1
STIP # BR-0033

Catawba River Basin Riparian Buffer Protection Program. The project study area is adjacent to a portion of the Catawba River with streamside riparian zones protected under provisions of the Catawba River Basin Riparian Buffer Protection Program, administered by NCDWR. Construction activities for this project will not take place until a final alignment and design have been determined and potential impacts to protected stream buffers have been identified.

NOT TO SCALE





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MCDOWELL COUNTY REPLACE
BRIDGE NO. 580084 ON
SR 1234 (PARKER PADGETT RD)
OVER I-40
STIP # BR-0033
WBS Element No. 67033.1.1

Project Tracking No. (Internal Use)

17-12-0047

HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	BR-0033	***County***:	McDowell
WBS No.:	67033.3.1	***Document Type***:	MCC
Fed. Aid No:	N/A	***Funding***:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	***Permit Type(s)***:	USACE
Project Description: Replace Bridge No. 580084 on SR1234 (Parker Padgett Road) over I-40.			

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

☒ There are no National Register-listed or Study Listed properties within the project's area of potential effects.

☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.

☐ There are no properties within the project's area of potential effects.

☐ There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.

☒ There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit:

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 8, 2018. Based on this review, there is a survey site (MC0129 Bridge No. 142) and several properties over fifty years of age within the Area of Potential Effects, which is defined as the study area on the following pages. A survey was required. It was determined that all structures over fifty years of age are unremarkable and do not warrant further evaluation. Bridge No. 142 was evaluated in a Historic Structures Survey Report in November 2018. It was determined not eligible, and the State Historic Preservation Office concurred with this finding on December 20, 2018. There are no National Register listed or eligible properties. If design plans change, additional review will be required.

SUPPORT DOCUMENTATION

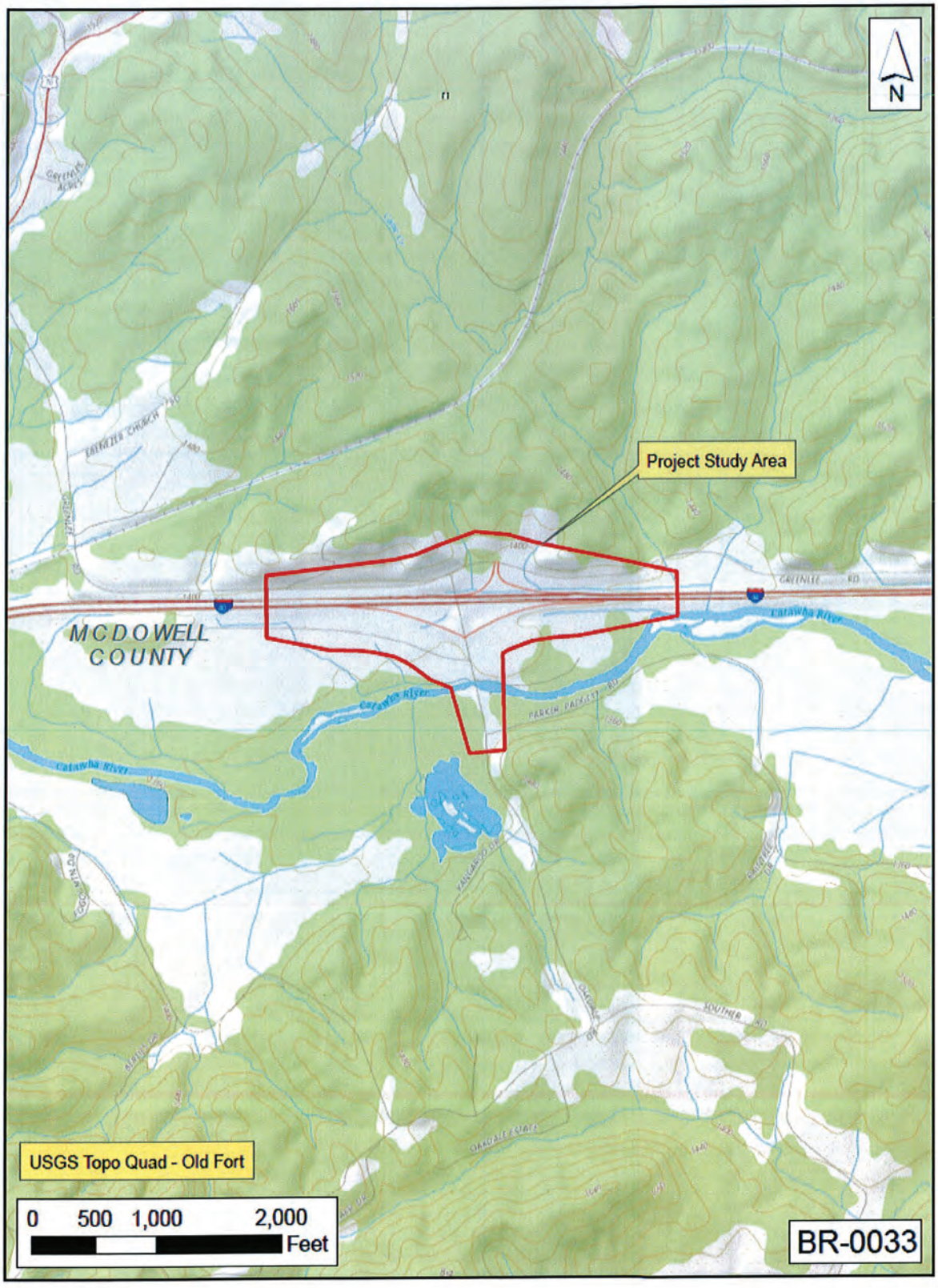
☒ Map(s) ☐ Previous Survey Info. ☐ Photos ☒ Correspondence ☐ Design Plans

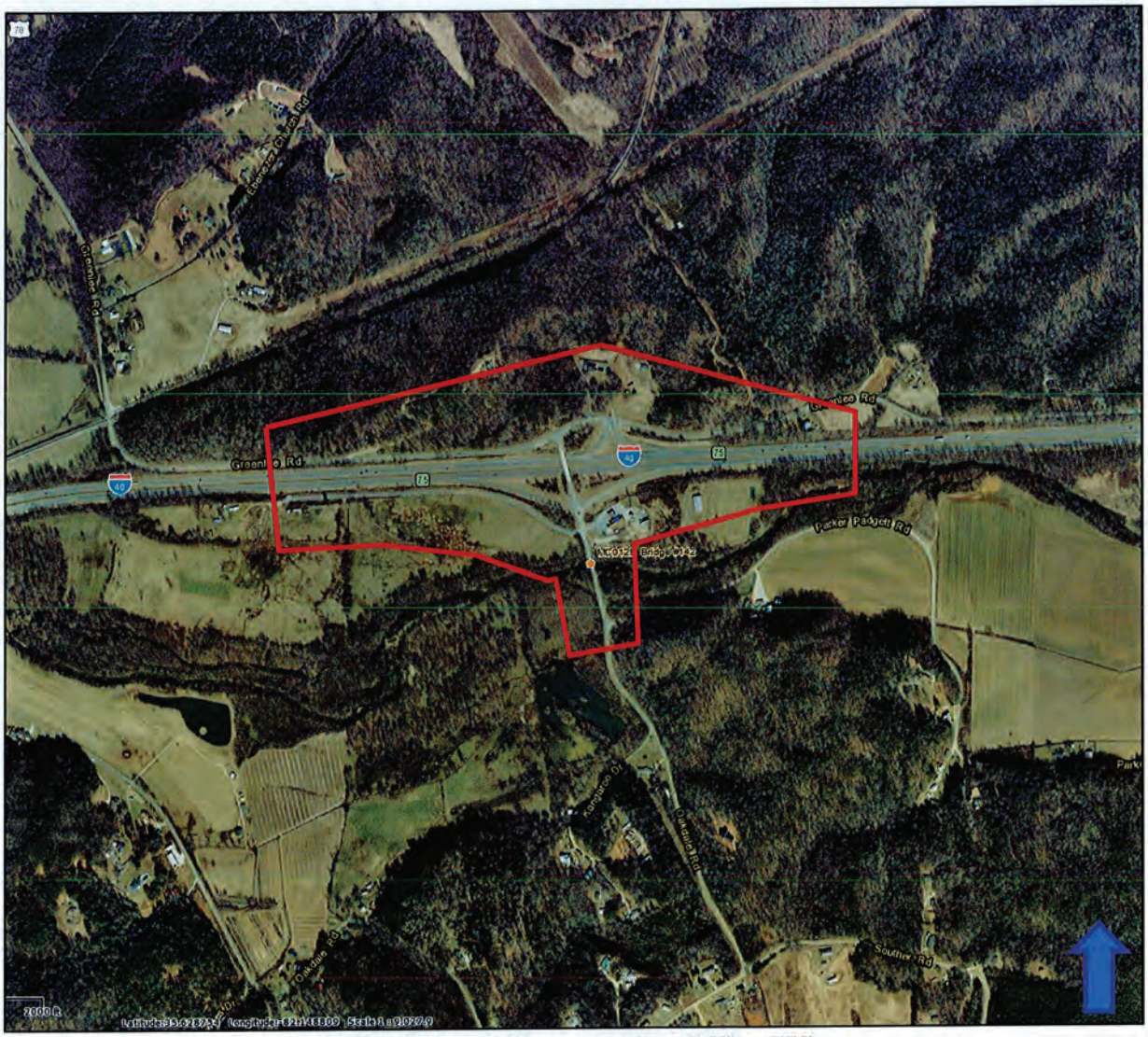
FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OF AFFECTED**

Kate Hubbard 12/20/2018

NCDOT Architectural Historian Date





State Historic Preservation Office GIS.

North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office
Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

December 20, 2018

MEMORANDUM

TO: Kate Husband
Office of Human Environment
NCDOT Division of Highways

FROM: Renee Gledhill-Earley
Environmental Review Coordinator

SUBJECT: Historic Structures Survey Report, Replace Bridge 84 on SR 1234 Over I-40, BR-0033, PA 17-12-0047, McDowell County, ER 18-3996

Thank you for your November 27, 2018, memorandum transmitting the above-referenced report. We have reviewed the report and concur that Bridge 142 (MC0129) is not eligible for listing in the National Register of Historic Places under any criteria for the reasons outlined in the report.

The above comments are made pursuant to Section 106 and 110 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT, mfurr@ncdot.gov

Location: 109 East Jones Street, Raleigh NC 27601 Mailing Address: 4617 Mail Service Center, Raleigh NC 27699-4617 Telephone/Fax: (919) 807-6570/807-6599

Project Tracking No.
17-12-0047

NO NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

PROJECT INFORMATION

Project No:	BR-0033	*County:*	McDowell
WBS No:	67033	*Document:*	State Minimum Criteria Checklist
F.A. No:		*Funding:*	☒ State ☐ Federal

Federal Permit Required? ☒ Yes ☐ No *Permit Type:* USACE

Project Description:
Replace Bridge 84 on SR 1240 (Parker Padgett Rd.) over Interstate 40 in McDowell County. The Area of Potential Effects (A.P.E.) is approximately 1,067 meters (3,500 ft.) long and 305 meters (1,000 ft.) wide.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

☒ There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed.)
☐ No subsurface archaeological investigations were required for this project.
☐ Subsurface investigations did not reveal the presence of any archaeological resources.
☒ Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
☐ All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Brief description of review activities, results of review, and conclusions:
see attached archaeological survey report

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☒ Photos ☐ Correspondence
Other: archaeological survey report

Signed:

CALEB SMITH **1/28/2019**

NCDOT ARCHAEOLOGIST Date

Archaeological Survey for the Proposed Replacement of Bridge No. 84 on SR 1240 (Parker Padgett Rd.) Over Interstate 40, McDowell County, North Carolina

Programmatic Agreement # 17-12-0047

By Brooke Brilliant, Archaeological Consultants of the Carolinas, Inc.
January 2019

Introduction

Bridge No. 84 is located on SR 1240 in south central McDowell County, approximately 3.6 kilometers (2.2 miles) northeast of the town of Old Fort (Figure 1). The archaeological Area of Potential Effects (APE) for this project encompasses an area that extends on both sides of Interstate 40. It is approximately 1,067 meters (3,500 ft) long and 305 meters (1,000 ft) wide at its widest.

The bridge, orientated approximately north-south, is located in a portion of the Catawba River valley (Figure 2). It crosses over Interstate 40, which is oriented east-west. To the north of Interstate 40, SR 1240 dead ends into Greenlee Road, a frontage road. The project area encompasses a strip of wooded ridge slope along the northern side of Greenlee road. The project area south of Interstate 40 is occupied with entrance ramps, pasture, and a commercial building. A frontage road, SR 1322, intersects SR 1240 just south of the bridge and extends west. An unnamed tributary extends southeast through the southwestern portion of the project area. It joins the Catawba River southwest of the project area. SR 1240 crosses Bridge No. 142 south of Bridge No. 84. Bridge No. 142 extends over the Catawba River, which traverses east-west through the southern portion of project area. South of the Catawba River, SR 1240 intersects with Oakdale Road (SR 1234) and then turns east. Oakdale Road extends south from this intersection. The landforms surrounding the Catawba River are relatively level floodplain and consist of pasture and wooded areas.

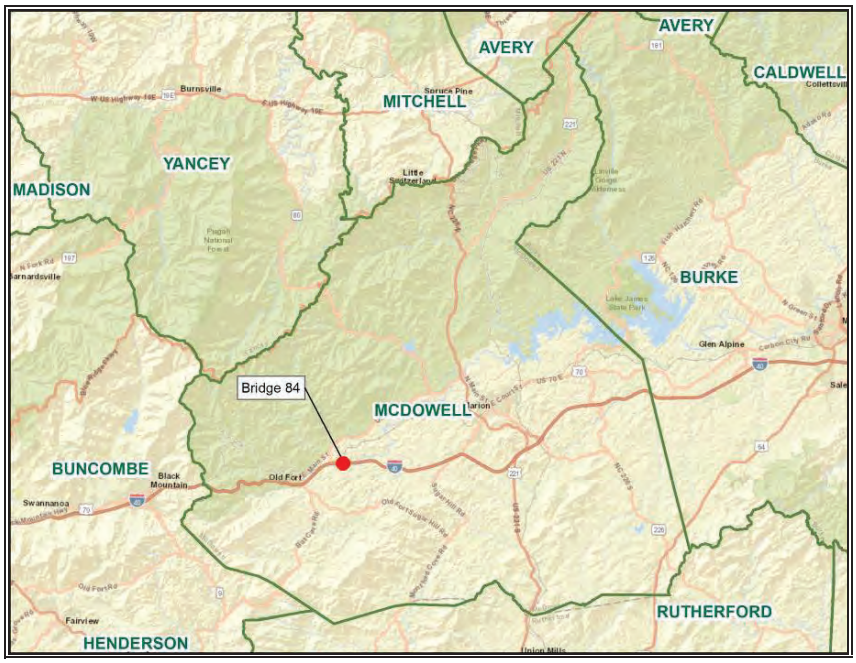


Figure 1. Location of Bridge No. 84 in McDowell County.

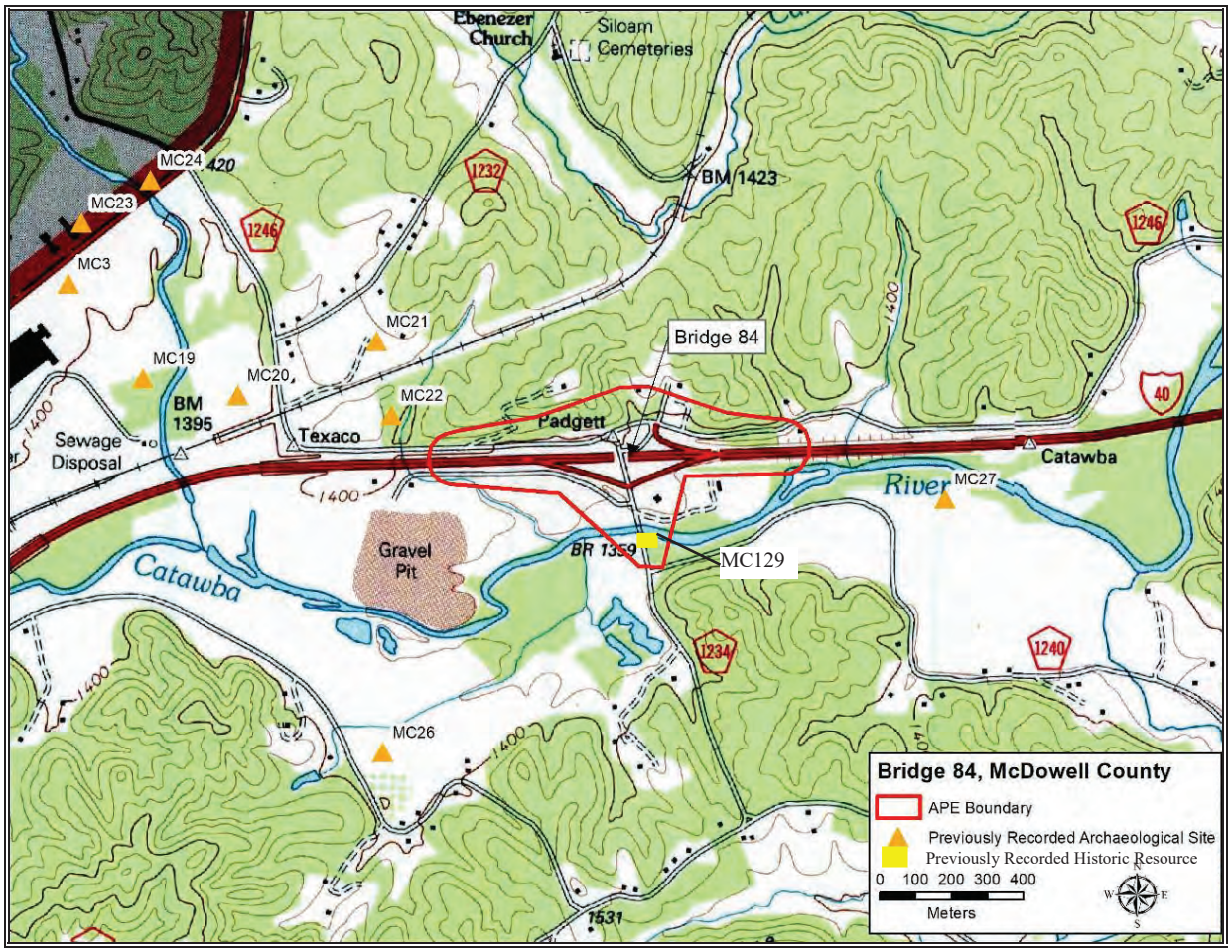


Figure 2. Topographic map of the project area (1982 USGS *Old Fort, NC* 1:24,000 scale topographic map).

A reconnaissance of the project was conducted by North Carolina Department of Transportation (NCDOT) archaeologist Caleb Smith on 3 March 2018. An archaeologcial survey of the level, well-drained landforms in the southwest and southeast quadrants of the APE was recommended. No survey was recommended in the northwest and northeast quadrants of the APE due to sloping landforms that have a low potential for archaeological sites (Smith 2018).

The archaeological survey of Bridge No. 84 was conducted by Luan Cao, Katherine Parker, and Mike Hayden of Archaeological Consultants of the Carolinas, Inc. (ACC) on 13 August through 16 August 2018. The following description was submitted to the NCDOT by ACC in September 2018.

Background Research

Background research consisted of an examination of topographic and historic maps and the listings of previously recorded sites, previous archaeological surveys, and previous environmental reviews at the Office of State Archaeology (OSA) in Raleigh.

Historic maps were reviewed to better understand the development in the project area. These maps include the 1922 Rural Delivery Route map (USPOD 1922), the 1938, 1958 and 1967 McDowell County Highway maps (NCSHPWC 1938, 1958, 1967), and USGS topographic maps dating from 1900 to

1982 (USGS 1900, 1957, 1962, 1982). One of the largest impacts to the area was the construction of Interstate 40 in the 1960s (NCRoads 2018). Prior to this time Bridge No. 84 and several of the roads in the area had not been constructed.

In the early 1900s the area is shown as relatively undeveloped with a rail line and few scattered houses north of the project area. A road is shown crossing the Catawba River in the project vicinity, but the eastern segment of SR 1240 is not shown, nor are the frontage roads (Figure 3). The eastern segment of SR 1240 is drawn on historic maps by the late 1930s. At this point the area is shown as more developed, with a greater number of structures in the surrounding vicinity (Figure 4). By the early 1960s, after the construction of Interstate 40, the roads through the area correspond to their current alignment (Figure 5). Two structures are located in the vicinity of the northeast quadrant on the 1962 topographic map but fall outside the project APE. These structures are also mapped on the 1982 topographic maps. This map also shows the Stuckey's/ Dairy Queen and a commercial building located in the southeastern quadrant (see Figure 2). In general, historic maps show the area shift from primarily undeveloped and agricultural, with few roads and structures, to mixed commercial and agricultural uses after the construction of Interstate 40.

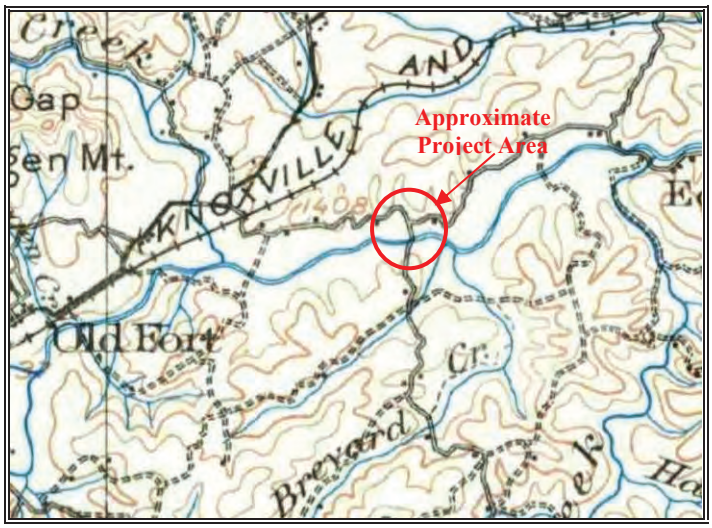


Figure 3. 1900 topographic map showing the project vicinity (1900 USGS *Mount Mitchel, NC* 1:125,000 scale topographic map).

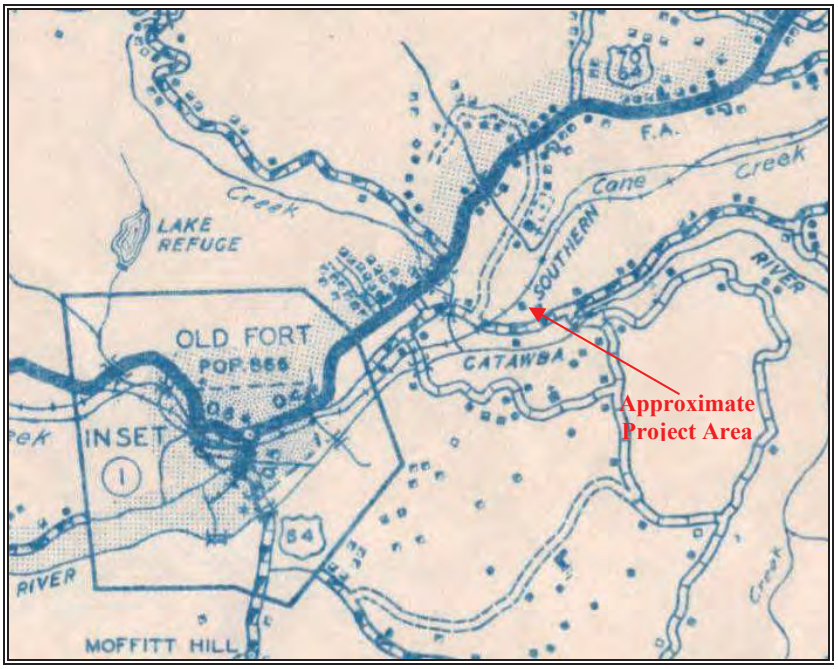


Figure 4. 1938 McDowell County Highway map (NCSHPWC 1938).

A review of records at the OSA indicate that 13 previously recorded archaeological sites are located within a 1.6 kilometer (1 mi) radius of the APE (see Figure 2). Table 1 summarizes these sites, all of which are unassessed for the National Register of Historic Places (NRHP). There is little information available about these sites other than a Research Laboratories of Archaeology (RLA) site form. Ten of the previously recorded sites were recorded by Keeler in 1970. Two (sites 31MC3, and 31MC3A) were recorded by Loy Carter. The year they were recorded is unknown. The 31MC3 site form notes that 31MC3 and 31MC3A are either two separate sites or two potential locations for a single site. A third site is also noted on the OSA topographic map and on the site form maps for sites 31MC3 and 31MC18. This site is referred to as "31MC--" and has not been given a site number. No other information is available for this site. None of these sites fall within the project APE and should not be impacted by the replacement of Bridge No. 84. No projects within the APE have been previously reviewed by the HPO.

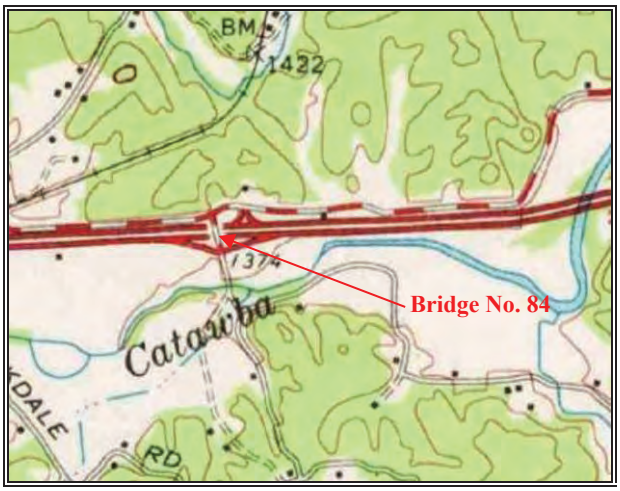


Figure 5. 1962 topographic map (1962 USGS *Marion, NC* 1:62,500 scale topographic map).

Table 1. Summary of Previously Recorded Archaeological Sites wtihin 1.6 Kilometer (1 mi) of the Project APE.

Site Number	NRHP Status	Component (s)	Comments	Reference
31MC--	Unassessed	Unknown prehistoric	Shown on the OSA topo and the site 31MC3 and 31MC18 site form maps, but no other information available	RLA site form on file at OSA
31MC3	Unassessed	Unknown prehistoric	Recorded by Loy Cartter,one of the three plotted locations of site 31MC3 shown on site form and OSA topo map, little other information available about site	RLA site form on file at OSA
31MC3A	Unassessed	Historic	Recorded by Loy Carter,one of the three plotted locations for site 31MC3 shown on site form and OSA topo map, little other information available about site	RLA site form on file at OSA
31MC18	Unassessed	Unknown prehistoric	Ceramic and lithic scatter recorded by Keeler in 1970, area residents note possibility of an Indian fort in the vicinity of the site	RLA site form on file at OSA
31MC19	Unassessed	Unknown prehistoric and historic	Prehistoric ceramic and lithic scatter and historic artifact scatter recorded by Keeler in 1970	RLA site form on file at OSA
31MC20	Unassessed	Unknown prehistoric	Ceramic scatter recorded by Keeler in 1970	RLA site form on file at OSA
31MC22	Unassessed	Unknown prehistoric	Recorded by Keeler in 1970, little other information available about the site	RLA site form on file at OSA
31MC23	Unassessed	Unknown prehistoric	Recorded by Keeler in 1970, little other information available about the site	RLA site form on file at OSA
31MC24	Unassessed	Unknown prehistoric	Recorded by Keeler in 1970, little other information available about the site	RLA site form on file at OSA
31MC25	Unassessed	Unknown prehistoric	Recorded by Keeler in 1970, site form notes that landownwer found little in field and that the site is referred to as "Old Indians fort"	RLA site form on file at OSA

31MC26	Unassessed	Unknown prehistoric	Recorded by Keeler in 1970, little other information available about the site	RLA site form on file at OSA
31MC27	Unassessed	Unknown prehistoric	Recorded by Keeler in 1970, little other information available about the site	RLA site form on file at OSA

Background research also included an examination of records on recorded historic resources using the Department of Historic Resources Survey and Planning Division's mapping application web site. One historic resource (MC129) is recorded within the project APE (see Figure 2). Resource MC 129 is Bridge No. 142. This bridge has surveyed only status for the NRHP.

There are nine soil types present in the Bridge No. 84 APE. These soil type include Biltmore loamy fine sand, Braddock clay loam, Dillard loam, Elsinboro loam, Evard-Cowee complex, Hayesville-Evard complex, Iotla sandy loam, Rosman loam, and Udiflulvents sand. The majority of the soils located in the APE on the north side of Interstate 40, Evard-Cowee complex and Hayesville-Evard complex, are well-drained and associated with steep slopes. The primary soils present in the APE on the south side of Interstate 40, Braddock clay loam, Dillard loam, Rosman loam, and Udifluvents sand, generally form on floodplains or stream terraces and are well-drained to excessively well-drained (USDA 2018). Table 2 summarizes the soil types in the project area.

Table 2. Summary of Soil Types Located in the Project Area.

Soil Type	Descripton	Location in APE
Biltmore loamy fine sand (BmA)	Forms on natural levees on floodplains from sandy alluvium, well-drained, occasionally flooded, slope range of up to 3 % slope	Southeast quadrant
Braddock clay loam (BrB2)	Forms on stream terraces from old alluvium, well-drained, eroded, 2-6% slope	Southwest quadrant
Dillard loam (DdB)	Forms on stream terraces from loamy alluvium, moderately well drained, 1 to 4 % slope, rarely flooded	Southeast and southwest quadrants
Elsinboro loam (EsB)	Forms on stream terraces from alluvium and/or colluvium derived from igneous and metamophic rock, well-drained, 1-4 % slope	Northeast quadrant
Evard-Cowee complex (EwE)	Forms on hillslopes and mountain slopes from residuum weathered from gneiss and/or mica schist, well-drained, 25-60 % slope	Northeast, southeast, and northwest quadrants
Hayesville-Evard complex (HeD)	Forms on mountain slopes and ridges from creep deposits over residuum weathered from igneous and metamorphic rock, well-drained, 15-25% slope	Northeast quadrant
Iotla sandy loam (IoA)	Forms on floodplains from loamy alluvium, somewhat poorly drained, up 2 2% slope	Southwest quadrant
Rosman loam (RoA)	Forms on floodplains from loamy alluvium, well drained, up to 3% slope, occasionally flooded	Southeast quadrant
Udifluvents sand (Uf)	Forms on floodplains from recent sandy and gravelly alluvium, excessively drained, frequently flooded	Southwest quadrant

Archaeological Survey

The archaeological survey consisted of the examination of 309 shovel test locations along 28 transects. The positions of these transects and shovel test were based on a 15-meter (49.2 ft) grid constructed in the ArcGIS program prior to field work. These transects were placed parallel to Interstate 40 in the southwest and southeast quadrants. No shovel testing was conducted in the northwest or

northwest quadrants due to the high level of disturbance in the area in combination with sloping landforms. Although no survey was recommended for these quadrants, these areas were visually examined during a walkover of the area. In the southwest and southeast quadrants, shovel tests were excavated at 15 meter (49.2 ft) intervals along each transect. These tests measured at least 30 centimeters (11.8 in) in diameter and were excavated a minimum of 5 centimeters (2.0 in) into sterile subsoil. All test fill was screened through 0.64 centimeter (0.25 in) wire mesh. Each shovel test was backfilled upon completion. Shovel tests were not excavated at locations with slope of greater than 15 percent, in wet or low-lying areas, or in clearly disturbed contexts. Global Positioning System (GPS) readings using a sub-meter accuracy Trimble GeoExplorer handheld GPS receiver were taken at each shovel test location, except in situations of extreme slope or other potentially dangerous conditions. In all areas, shovel testing was supplemented by comprehensive examination of all exposed ground surface. Figures 6 and 7 show the shovel test locations on an aerial map, and Figure 8 shows the shovel tests on a LiDAR image. LiDAR, an acronym for *Light Detection and Ranging*, is a remote sensing method which uses lasers to collect three dimensional data about the ground surface (Jones 2010). A hill-shading effect can be applied to a LiDAR image to better view topographic features. This technique uses a hypothetical light source to create shadows which highlight minute changes in the ground surface (Jones 2010; Schuckman and Renslow 2014). The LiDAR image exemplifies areas of extreme slope within portions of the northern quadrants.

A site is defined as an area containing one or more artifacts within a 30-meter or less diameter or where surface or subsurface cultural features are present. Artifacts and/or features less than 50 years in age would not be considered a site without a specific research or management reason. When an archaeological site is located, site settings are photographed with a digital camera. Sketch maps are produced in the field showing the locations of shovel tests and surface finds. The location of each site is recorded using a Trimble Pathfinder Global Positioning System (GPS) unit and relayed onto project maps. One archaeological site (31MC426) was identified in the southeast quadrant. This site will be discussed in detail below.

Site significance is based on the site's ability to contribute to our understanding of past lifeways, and its subsequent eligibility for listing on the NRHP. Department of Interior regulations (36 CFR Part 60) established criteria that must be met for an archaeological site or historic resource to be considered significant, or eligible for the NRHP (Townsend et al. 1993). Under these criteria, a site can be defined as significant if it retains integrity of "location, design, setting, materials, workmanship, feeling, and association" and if it *A)* is associated with events that have made a significant contribution to the broad pattern of history; *B)* is associated with the lives of persons significant in the past; *C)* embodies distinctive characteristics of a type, period, or method of construction, or represents work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or *D)* has yielded, or is likely to yield, information important in history or prehistory. Archaeological sites are most frequently evaluated pursuant to Criterion D. However, all archaeological sites can be considered under all four criteria.

The primary goals of this field investigation were to identify archaeological resources and evaluate their potential research value or significance. Although the determination of the site significance is made by the SHPO, whenever possible, sufficient data is gathered to allow us to make a significance recommendation. Sites that exhibit little or no further research potential are recommended *not eligible* for the NRHP, and no further investigation is proposed. Sites for which insufficient data could be obtained at the survey level are considered *unassessed* and preservation or more in-depth investigation is advocated. It is rare for ample data to be recovered at the survey level of investigation to definitively determine that a site meets NRHP eligibility criteria. However, when this occurs, the site is recommended *eligible* for the NRHP. Again, preservation of the resource is advocated. If preservation is not possible, mitigation options (e.g., data recovery) would need to be considered.

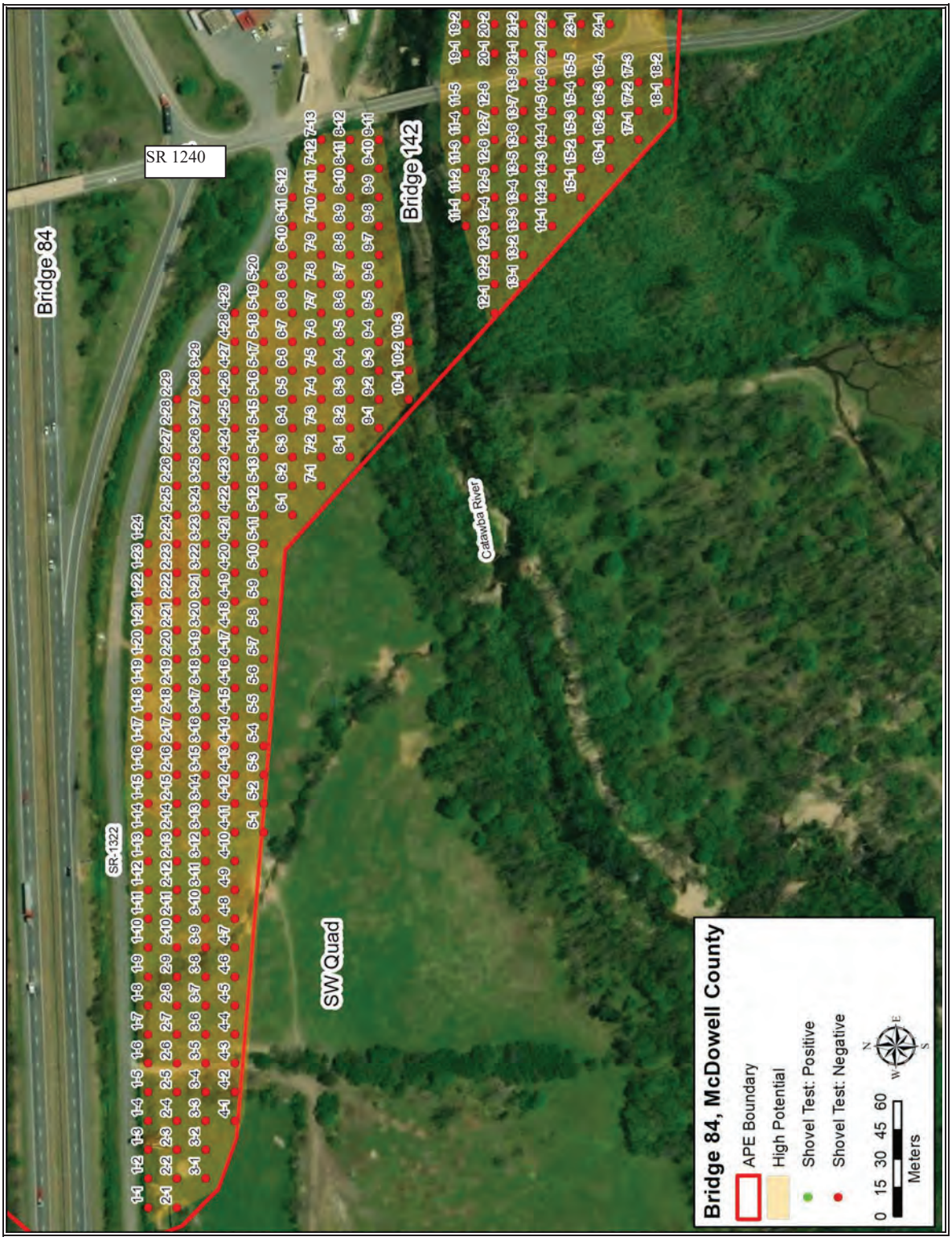


Figure 6. Aerial image of the southwest quadrant showing the locations of shovel tests.

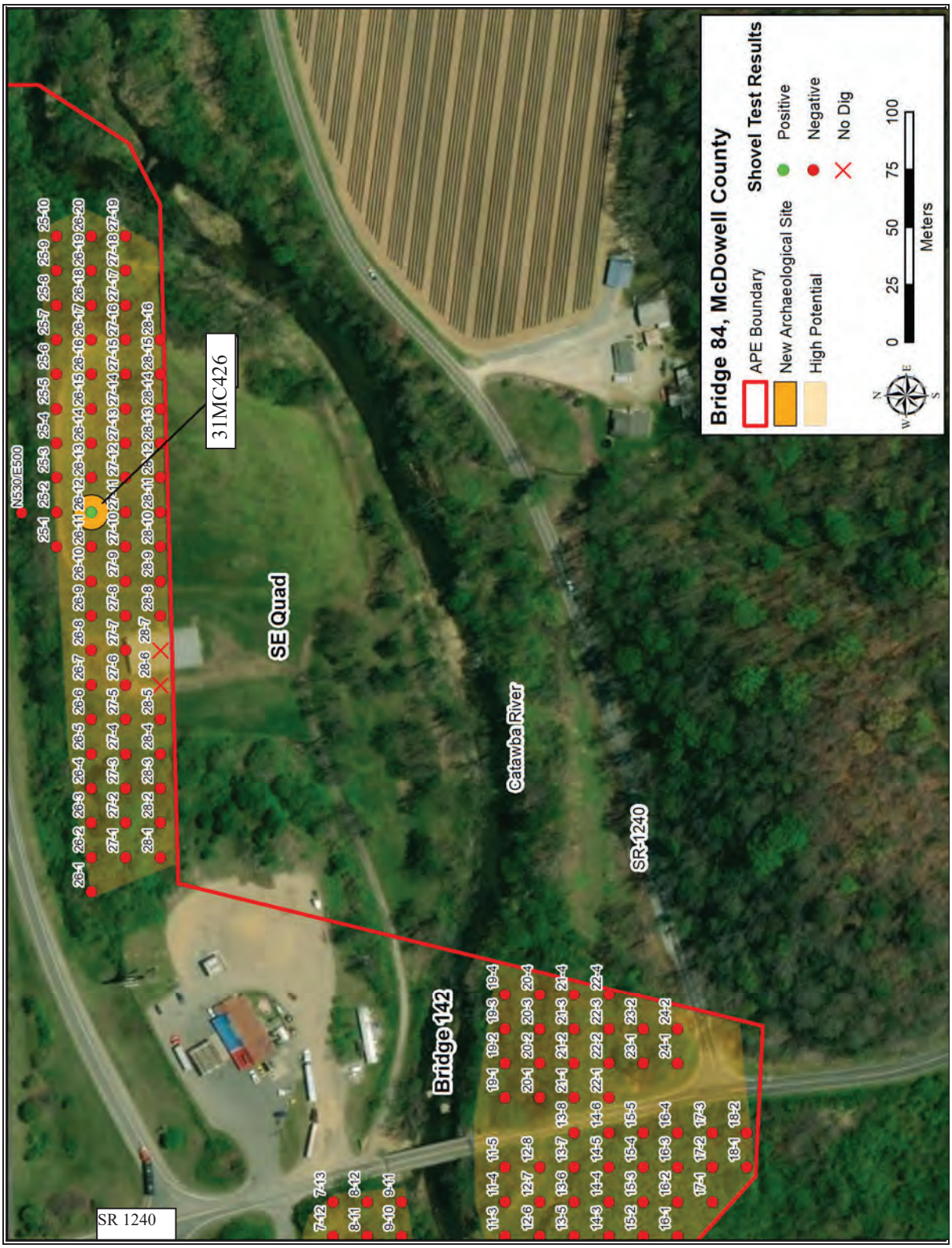


Figure 7. Aerial image of the sotuheast quadrant showing the locations of shovel tests and site 31MC426.

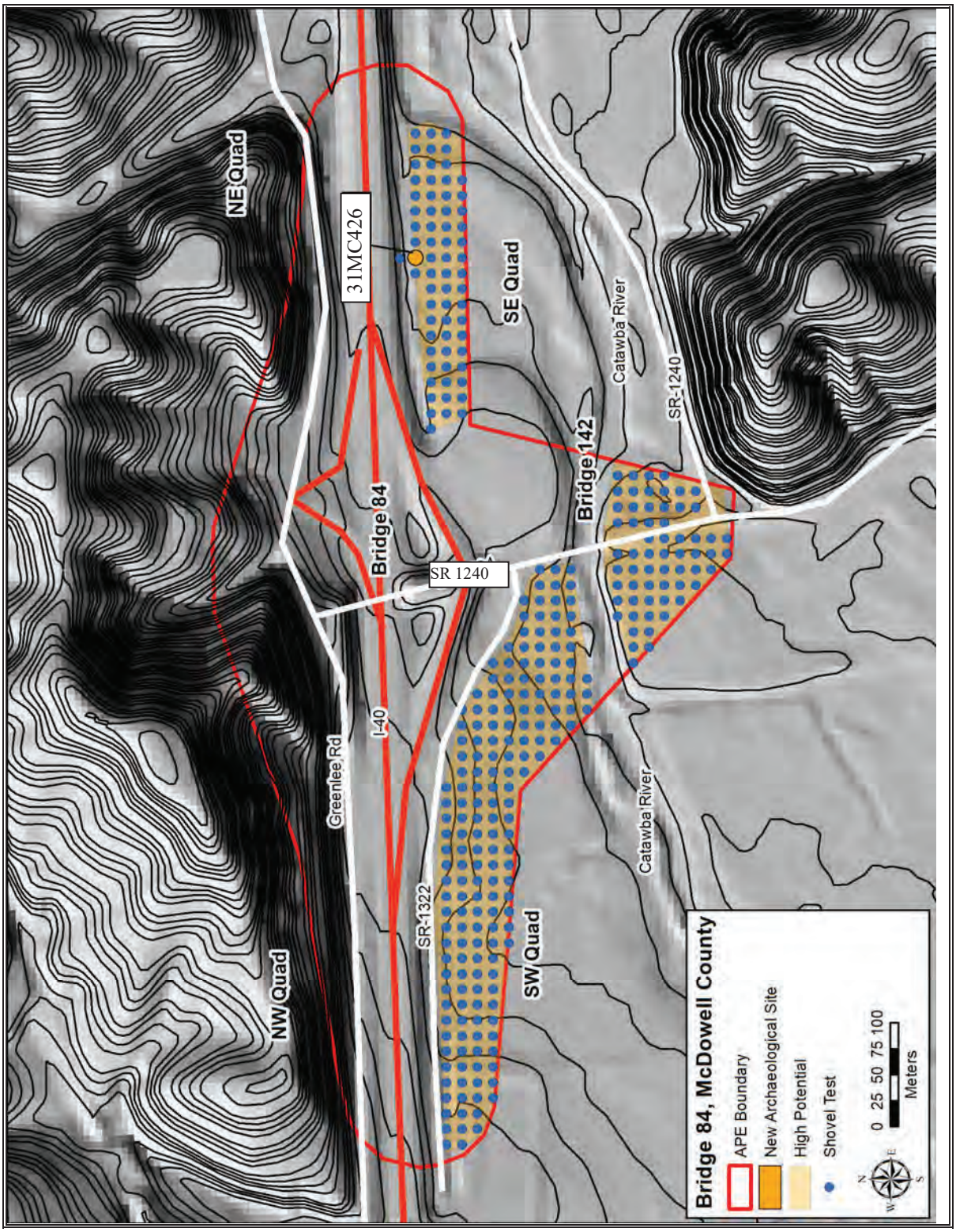


Figure 8. LiDAR map of the Bridge No. 84 APE showing shovel test locations and site 31MC426 (Jones 2010).

Laboratory work began with washing all recovered artifacts. A provenience number, based on the context of the artifact (i.e., surface or subsurface), was assigned to each positive shovel test location or surface collection area. Within each provenience, each individual artifact or artifact class was then assigned a number. Artifacts were cataloged based on specific morphological characteristics such as material in the case of prehistoric lithics, and decoration and temper type in the case of prehistoric ceramics. Had they been recovered, historic artifacts would have been identified by color, material of manufacture (e.g., ceramics), type (e.g., slipware), form (e.g., bowl, plate), method of manufacture (e.g., molded), period of manufacture (e.g., 1780-1820), and intended function (e.g., tableware). Historic artifacts with established manufacture date ranges would have been categorized using Aultman et al. (2016), Brown (1982), Florida Museum of Natural History (2009), Noël Hume (1969), and South (1977, 2004). Artifact descriptions, counts, and weights were recorded. All diagnostic and cross-mended artifacts were labeled with a solution of Acryloid B-72 and acid-free permanent ink.

At the conclusion of this project all project related material, including field notes, artifacts, and project maps, will be prepared for curation based on standards set forth in 36 CFR 79 (*Curation of Federally Owned and Administered Archaeological Collections: Final Rule)* and in the OSA Curation guidelines. These standards and guidelines require that all project-related material be placed in archivally stable storage bags and boxes. Upon acceptance of the final project report by the SHPO, the project material will be submitted to OSA for permanent curation.

Southwest Quadrant. The APE in the southwest quadrant primarily encompasses floodplain south of Interstate 40 and west of SR 1240. The Catawba River extends west through the APE in the southern portion of the quadrant. The area south of the river and west of SR 1240 is wooded floodplain, aside from a transmission line corridor, which extends approximately north-south thorough the area (Figure 9). A small portion of the land north of the river is also wooded floodplain. The northern portion of the southwest quadrant includes a strip of overgrown land between Interstate 40, and interstate exit, and a frontage road (SR 1322) on the south side of Interstate 40 (Figure 10). Much of the area south of Interstate 40 and west of SR 1240 is floodplain used as pasture. A transmission line corridor extends through the pasture adjacent to SR 1322. A gravel farm road intersects SR 1322 at the western end of the quadrant and extends south through the pasture. A dilapidated concrete block outbuilding and a large shed sit along SR 1322 next to its intersection with the farm road (Figure 11). Just east of this intersection an unnamed tributary extends northwest-southeast through the northwest end of the quadrant. The southwest quadrant is relatively undisturbed, aside from a graded area associated with the transmission line corridor in the southern portion of the quadrant and the construction and maintenance of Interstate 40 and roads through the area.

Figure 9. View of the transmission line corridor in the southern portion of the southwest quadrant, looking west.

Figure 10. View of SR 1322 in the northern portion of the southwest quadrant, looking southeast.

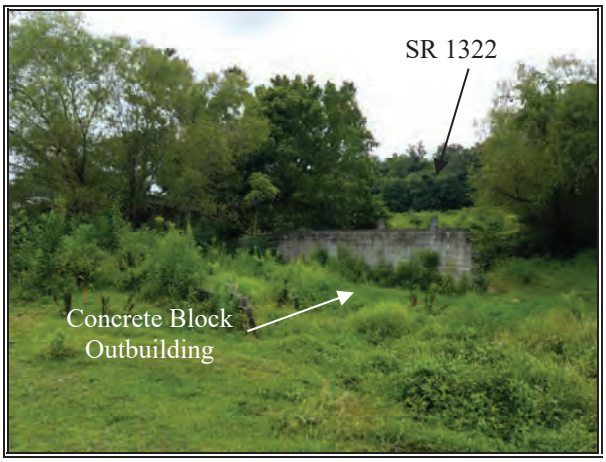


Figure 11. View of a dilapidated concrete block outbuilding in the northern portion of the southwest quadrant, looking north.

A total of 223 shovel test locations were examined in the southwest quadrant along Transects 1 through 18 (Figure 6 and Table A1). These transects extended through pasture and wooded floodplain areas.

Shovel test profiles varied throughout the quadrant. In the pasture, shovel test profiles generally exposed 10 centimeters (3.9 in) of dark grayish brown (10YR4/2) sandy loam overlying 10 centimeters (3.9 in) of yellowish brown (10YR5/6) sandy clay loam (Figure 12). These shovel test profiles generally concur with the expected profile for the area (USDA 2018). Shovel test profiles from the wooded area featured 25 centimeters (9.8 in) of dark brown (10YR3/3) sandy loam overlying 10 centimeters (3.9 in) of brownish yellow (10YR6/8) sandy clay loam (Figure 13). The shovel tests excavated in the transmission line corridor in the southern portion of the quadrant exposed profiles indicative of disturbance. These profiles were characterized by 30 centimeters (11.8 in) of dark yellowish brown (10YR4/ 4) rocky sandy loam overlying 10 centimeters (3.9 in) of dark yellowish brown (10YR4/4) sand mixed with impenetrable gravel (Figure 14). The soil profiles from the wooded area and transmission line corridor differ in soil texture and strata from those recorded for the area. The recorded soil profile is 203 centimeters (80 in) of sand (USDA 2018). This difference may be an indication of disturbance from road and transmission line construction and erosion. None of the excavated shovel tests in the southwest quadrant yielded cultural material.

Figure 12. Representative shovel test (3-3) profile from pasture in southwest quadrant, looking west.

Figure 13. Representative shovel test (15-3) profile from wooded area in southwest quadrant, looking west.

Figure 14. Representative shovel test (12-8) profile from transmission line corridor in southwest quadrant, looking west.

Southeast Quadrant. The southeast quadrant is characterized by a level floodplain. The northern section of the quadrant has been highly disturbed by the construction of Interstate 40 and a developed parcel of land. The northeastern portion of the quadrant is a triangular strip of overgrown land between the Interstate 40 entrance ramp and Interstate 40. Just south of the intersection of SR 1240 and the Interstate 40 entrance ramp a driveway intersects SR 1240 and extends east, leading to a Stuckey's/Dairy Queen and large dirt parking area (Figure 15). Located east of the Stuckey's/Dairy Queen complex and south of Interstate 40 is floodplain terrace encompassing a commercial building surrounded by woods to the west and a grassy area to the east (Figure 16). A gravel driveway intersects SR 1240 south of the Stuckey's/Dairy Queen and just north of Bridge 147. A mobile home sits on the north side of this driveway near its intersection with SR 1240 (Figure 17). The driveway cuts through the quadrant, following roughly parallel to the northern bank of the Catawba River. In the southern end of the quadrant, SR 1240 intersects with Oakdale Road. At this intersection SR 1240 curves sharply to the east, while Oakdale Road continues south. The area around this intersection has been graded. The area south of the Catawba River and north and east of this intersection is wooded floodplain bisected by a graded transmission line corridor that crosses east-west through the area (Figure 18).

Figure 15. View of parking area in the southeast quadrant, looking east.

A total of 85 survey shovel test and one delineation shovel test locations were examined in the southeast quadrant. The initial survey of the area included the examination of 85 shovel tests along Transects 19 through 28 (Figure 7 and Table A2). These transects extended through wooded floodplain, grassy areas and a transmission line corridor. Two shovel tests (28-6 and 28-7) were not excavated because they fell within a commercial building.

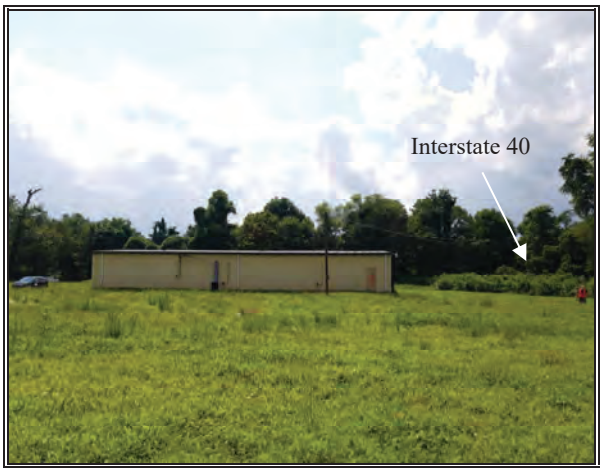


Figure 16. View of commercial building and grassy area in the southeast, quadrant, looking west.

Figure 17. View of gravel driveway parallel to the Catawba River in the southeast quadrant, looking east.

Figure 18. View of floodplain south of the Catawba River in the southeast, quadrant, looking east.

Shovel test profiles differed between the grassy and wooded floodplain terrace in the northern portion of the quadrant, wooded floodplain in the southern portion of the quadrant, and the transmission line corridor. A typical shovel test soil profile in the northern floodplain terrace exhibited 60 centimeters (23.6 in) of very dark grayish brown (10YR3/2) sandy loam overlying 10 centimeters (3.9 in) of dark yellowish brown (10YR4/4) sandy loam (Figure 19). In the wooded floodplain south of the Catawba River, shovel test profiles generally exposed 50 centimeters (19.7 in) of dark brown (10YR3/3) sandy loam overlying 10 centimeters (3.9 in) of yellowish brown (10YR5/4) sandy loam (Figure 20). The shovel test soil profiles from both of these portions of the southeast quadrant are similar to those expected for the area (USDA 2018). The shovel tests excavated in the transmission line corridor extending through the southern section of the quadrant exemplify the disturbance to the area from the construction of this corridor. These shovel tests profiles are characterized by 30 centimeters (11.8 in) of dark yellowish brown (10YR4/4) rocky sandy loam overlying 10 centimeters (3.9 in) of dark yellowish brown (10YR4/4) sandy loam mixed with a high density of gravel (Figure 21).

One of the initial survey shovel tests (26-6) contained prehistoric ceramic sherds. In order to define the site boundaries and evaluate the soil conditions, this positive shovel test was delineated at 15-meter (49.21 ft) intervals in cardinal directions. This resulted in the excavation of one additional shovel test (N530 E500) 30 meters north of the original positive. This site was given state site number 31MC426 and will be discussed in detail below

Site 31MC426 is a small prehistoric ceramic scatter located on a grassy floodplain terrace in the northern portion of the southeast quadrant of the APE. The site is bounded to the north by Interstate 40 and a

Figure 19. Representative shovel test (26-12) profile from floodplain terrace in southeast quadrant, looking east.

Figure 20. Representative shovel test (19-1) profile from wooded floodplain in southern portion of southeast quadrant, looking east.

commercial building is located west of the site. Site dimensions of 15 by 15 meters (49.21 X49.21 ft) were determined based on the single positive shovel test (Figure 22). This shovel test contained two ceramic sherds in the plow zone in the upper 30 centimeters (11.8 in) of soil. One of these ceramic sherds exhibits medium sand temper and has been identified as Pisgah Complicated Stamped (John Cable, pers. Comm; Figure 23). This ceramic type is diagnostic of the Mississippian Period (Keel 1976). The other sherd is a residual and too small to identify with confidence.

Figure 21. Representative shovel test (21-1) profile from transmission line corridor in southeast quadrant, looking west.

Site 31MC426 is very small Mississippian site. The area around the site has been severely disturbed by the construction of Interstate 40 and a commercial building. The artifact assemblage is small and lacks diversity, and evidence of features or other cultural remains is absent. Given these factors the site is not likely to provide new or significant information about Mississippian lifeways in McDowell County. The site does not meet NRHP eligibility criteria.

Northwest Quadrant. The northwest quadrant is on the northern side of Interstate 40. In the southern portion of this quadrant a frontage road (Greenlee Road) extends parallel to Interstate 40 and intersects SR 1240 just north of Bridge No. 84. A narrow strip of land sits between the frontage road and Interstate 40 (Figure 24). A gravel driveway intersects Greenlee Road in the western portion of the quadrant and extends east through the project area (Figure 25). The portion of the quadrant on the northern side of the frontage road is very steep wooded hill slope. Shovel tests were not excavated in this quadrant due to the extreme slope and disturbance to the area from Interstate 40 and the frontage road.

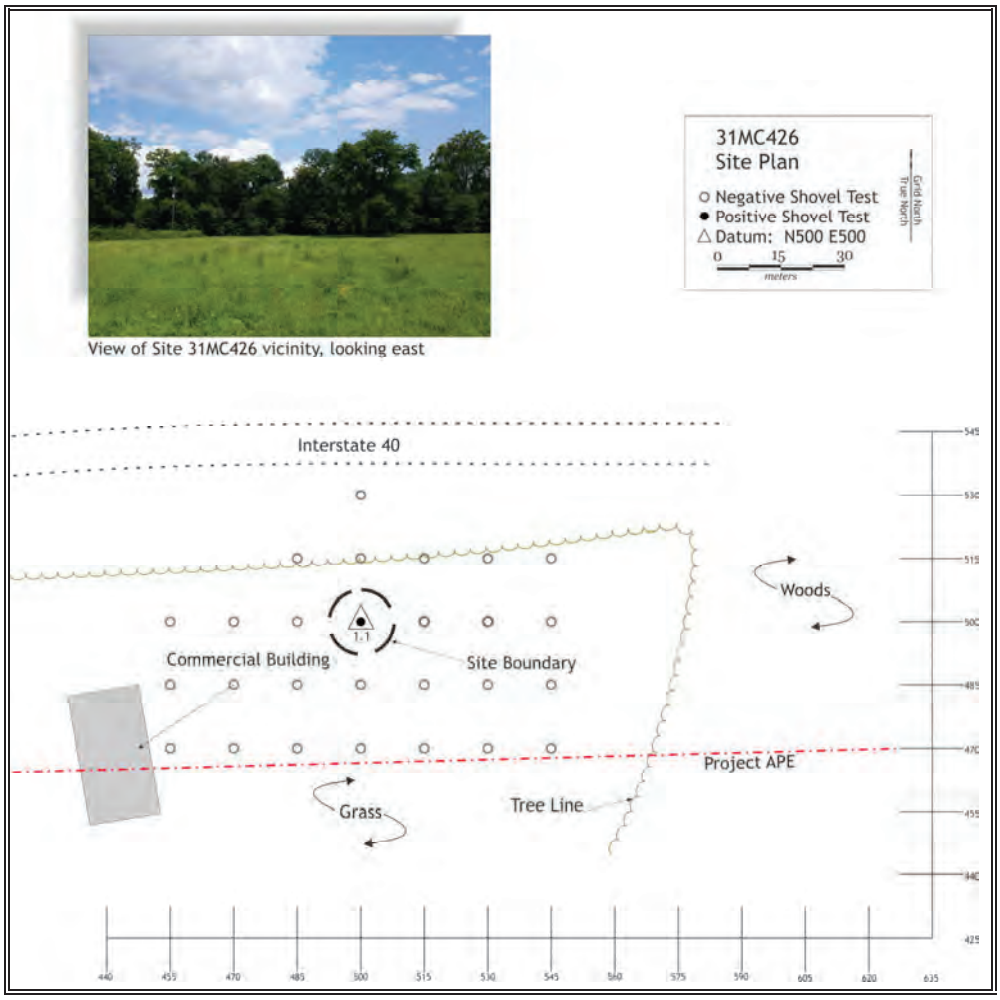


Figure 22. Plan map of site 31MC426

Figure 23. Pisgah Complicated Stamped (left) and residual (right) ceramic sherds recovered from site 31MC426.

Figure 24. View of northwest quadrant, looking east toward intersection with SR 1240.

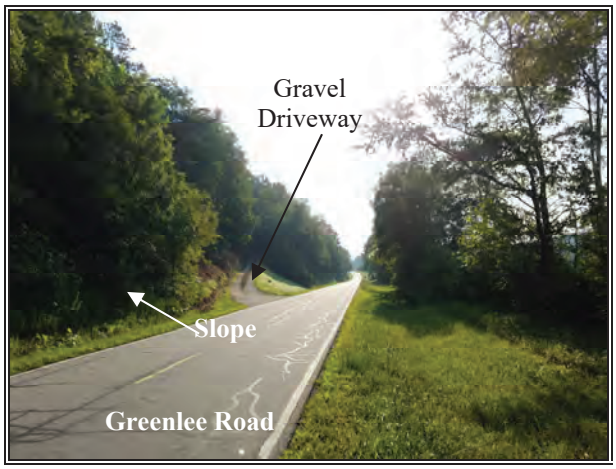


Figure 25. View of northwest quadrant showing gravel driveway, looking east toward Bridge No. 84.

Northeast Quadrant. The northeast quadrant encompasses Interstate 40 entrance and exit ramps which merge with Greenlee Road in the western portion of the quadrant (Figure 26). Greenlee Road follows along the northern side of Interstate 40 through the project area. Small sections of land sit between the interstate ramps, Interstate 40, and Greenlee Road. Steep hillslope characterizes the quadrant north of Greenlee Road (Figure 27) A grassy area is located northeast of the intersection of Greenlee Road and the Interstate 40 entrance and exit ramps. Two dilapidated wood outbuildings are situated in this area, just outside the APE (Figure 28). These outbuildings are likely associated with a house located north of the project area. This house is shown on the 1962 and 1983 topographic maps (USGS 1968, 1983; see Figures 2 and 5). Two driveways intersect Greenlee Road west of the grassy area. These driveways extend north to houses located outside the project area. In the northeastern end of the quadrant a dirt road extends north from Greenlee Road. The remainder of the northern portion of the northwest quadrant is an undeveloped wooded area. The northeast quadrant was not shovel tested due to steep slope and disturbance.

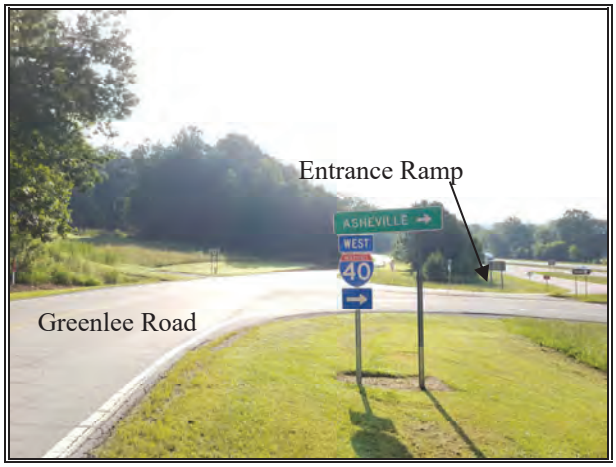


Figure 26. View of northeast quadrant, looking east.

Figure 27. View of slope in northeast quadrant, looking west.

Figure 28. View of grassy area in northeast quadrant and outbuildings outside the project APE, looking north.

Conclusion. An archaeological survey was conducted within the APE of Bridge No. 84 on SR 1240 over Interstate 40 in advance of the replacement of this bridge. The southern portion of the APE was intensely surveyed at 15-meter (49.2 ft) intervals. The northern portion of the APE was only given a cursory examination because of steep slopes and disturbance from development. This survey resulted in the identification of one Mississippian Period ceramic scatter (31MC426) in the southeast quadrant of the APE. This site is recommended not eligible for the NRHP and no additional archaeological investigations are recommended. Based on the results of this survey and background research, the replacement of Bridge No. 84 will not impact any significant archaeological resources.

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Appendix A. Shovel Test Profile Tables

Table A1. Shovel Test Locations Examined in the Southwest Quadrant.

Transect - Shovel Test	Dig/No Dig	Soil Strata I Depth	Soil Strata I Description	Soil Strata II Depth	Soil Strata II Description	Comments
1-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-14	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-15	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-16	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-17	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

1-18	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-19	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-20	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-21	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-22	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-23	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
1-24	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

2-14	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-15	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-16	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-17	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-18	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-19	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-20	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-21	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-22	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-23	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-24	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-25	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-26	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-27	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-28	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
2-29	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

3-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
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3-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-14	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-15	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-16	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-17	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-18	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-19	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
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3-21	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-22	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-23	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-24	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

3-25	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-26	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-27	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-28	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
3-29	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-14	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-15	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

4-16	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-17	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-18	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-19	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-20	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-21	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-22	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-23	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-24	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-25	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-26	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-27	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-28	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
4-29	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

5-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-14	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-15	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-16	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-17	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-18	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-19	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
5-20	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

6-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
6-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
7-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

8-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
8-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain

9-10	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
9-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-1	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-2	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-3	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-4	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-5	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-6	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-7	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-8	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-9	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-10 cm (0-3.9 in)	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-11	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-12	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-13	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
10-14	Dig	0-10 cm (0-3.9 in)	Dark grayish brown (10YR4/2) sandy loam	10-20 cm (3.9-7.9 in)	Yellowish brown (10YR5/6) sandy clay loam	Grassy pasture, floodplain
11-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
11-2	Dig	0-30 cm (0-11.8 in) cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
11-3	Dig	0-30 cm (0-11.8 in) cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor

11-4	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
11-5	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-3	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-4	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-5	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-6	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
12-7	Dig	0-30 cm (0-11.8 in) cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
12-8	Dig	0-30 cm (0-11.8 in) cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
13-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
13-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
13-3	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
13-4	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
13-5	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
13-6	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
13-7	Dig	0-30 cm (0-11.8 in) cm	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor

13-8	Dig	0-30 cm (0-11.8 in) cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
14-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
14-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
14-3	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
14-4	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
14-5	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
14-6	Dig	0-30 cm (0-11.8 in) cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8-15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
15-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
15-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
15-3	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
15-4	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
15-5	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
16-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
16-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
16-3	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
16-4	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
17-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
17-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
17-3	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain

18-1	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain
18-2	Dig	0-25 cm (0-9.8 in)	Dark brown (10YR3/3) sandy loam	25-35 cm (9.8-13.8 in)	Brownish yellow (10YR6/8) sandy clay loam	Wooded floodplain

Table A2. Shovel Test Locations Examined in the Southeast Quadrant.

Transect - Shovel Test	Dig/No Dig	Soil Strata I Depth	Soil Strata I Description	Soil Strata II Depth	Soil Strata II Description	Comments
19-1	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
19-2	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
19-3	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
19-4	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
20-1	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
20-2	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
20-3	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
20-4	Dig	0-50 cm (0-19.7 in)	Dark brown (10YR3/3) sandy loam	50-60 cm (0-23.6- in)	Yellowish brown (10YR5/4) sandy loam	Wooded floodplain
21-1	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
21-2	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
21-3	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
21-4	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
22-1	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor

22-2	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
22-3	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
22-4	Dig	0-30 cm (0-11.8 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sand with impenetrable gravel	Transmission line corridor
23-1	Dig	0-30 cm (0-11.8 in)	Very dark grayish brown (10YR3/2) sandy loam	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	Wooded, graded disturbed
23-2	Dig	0-30 cm (0-11.8 in)	Very dark grayish brown (10YR3/2) sandy loam	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	Wooded, graded disturbed
24-1	Dig	0-30 cm (0-11.8 in)	Very dark grayish brown (10YR3/2) sandy loam	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	Wooded, graded disturbed
24-2	Dig	0-30 cm (0-11.8 in)	Very dark grayish brown (10YR3/2) sandy loam	30-40 cm (11.8 -15.7 in)	Dark yellowish brown (10YR4/4) sandy loam, rocky	Wooded, graded disturbed
25-1	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
25-2 N515 E500	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
25-3	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
25-4	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
25-5	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
25-6	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
25-7	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
25-8	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
25-9	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
25-10	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-1	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace

26-2	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-3	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-4	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-5	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-6	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-7	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-8	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-9	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-10 N500 E470	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-11 N500 E485	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-12 N500 E500	*Dig*	*0-60 cm (0-23.6- in)*	*Very dark grayish brown (10YR3/2) sandy loam*	*60-70 cm (23.6-27.6 in)*	*Dark yellowish brown (10YR4/4) sandy loam*	*Grassy floodplain terrace;* ***two ceramic sherds 0-30 cm (0-11.8 in)***
26-13 N500 E515	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-14 N500 E530	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-15	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-16	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-17	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
26-18	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-19	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
26-20	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
27-1	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace

27-2	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
27-3	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
27-4	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
27-5	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
27-6	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-7	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-8	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-9	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-10	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-11 N485 E500	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-12	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-13	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-14	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-15	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-16	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-17	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Grassy floodplain terrace
27-18	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
27-19	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
28-1	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
28-2	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace

28-3	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
28-4	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
28-5	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Wooded floodplain terrace
28-6	No dig	N/A	N/A	N/A	N/A	Warehouse
28-7	No dig	N/A	N/A	N/A	N/A	Warehouse
28-8	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-9	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-10	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-11 N470 E500	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-12	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-13	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-14	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-15	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
28-16	Dig	0-60 cm (0-23.6- in)	Very dark grayish brown (10YR3/2) sandy loam	60-70 cm (23.6-27.6 in)	Dark yellowish brown (10YR4/4) sandy loam	Floodplain terrace
N530/E500	Dig	0-50 cm (0-19.7 in)	Very dark grayish brown (10YR3/2) sandy loam	50-60 cm (0-23.6- in)	Dark yellowish brown (10YR4/4) sandy loam	Highway Embankment

Appendix B. Artifact Catalog

Artifact Catalog
NCDOT Bridges-Polk and McDowell

Site 31MC426 **Accession Number:** 2018.0574

Provenience Number: 1.1 Bridge No. 84, N500 E500, 0-30 cm

Catalog Number	Specimen Number	Quantity	Weight (g)	Description	Comments
1	p1	1	3.6	Medium Sand Temper Pisgah Complicated Stamped Body Sherd	
2	p2	1	1	Residual Sherd	MST, eroded plain, UID type