



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

September 16, 2021

U. S. Army Corps of Engineers  
Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

ATTN: Ms. Lori Beckwith  
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 14, and 401 Water Quality Certification** Replacement of Bridge No. 580084 on SR 1234 (Parker Padgett Rd) over I-40 in McDowell County, North Carolina, Division 13, TIP No. BR-0033. Debit \$240 from WBS Element No. 67033.1.1

Dear Ms. Beckwith:

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge number 84 on SSR 1234 (Parker Padgett Road) over I-40 in McDowell County with a 209 foot, 2-span reinforced concrete bridge with steel piles and girders. The proposed bridge will be placed east of the existing bridge alignment, keeping the existing bridge during construction as an onsite detour. This action will result in 109 lf of permanent impacts to streams from a channel relocation into a lateral base ditch and <0.01 ac of temporary construction impacts to streams from dewatering. Due to the condition of the current channelized ditch-like feature, and the replacement of this feature with a similar but stable feature, NCDOT is not proposing mitigation for this project. NCSAM forms are included in this application package.

Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan, and Permit Drawings. A Minimum Criteria Determination Checklist (MCDC) was completed in November 2018 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of February 15, 2022, and a review date of December 28, 2021.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <https://xfer.services.ncdot.gov/pdea/PermApps/>. If you have any questions or need additional information, please contact Jeff Hemphill at (919) 219-8581.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Luby".

 Philip S. Harris III, P.E., C.P.M.  
Environmental Analysis Unit Head

cc:  
NCDOT Permit Application Standard Distribution List



## Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits  
(along with corresponding Water Quality Certifications)

June 1, 2021 Ver 4.1

Please note: fields marked with a red asterisk \* below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

### A. Processing Information

#### County (or Counties) where the project is located:\*

McDowell

#### Is this a NCDMS Project\*

Yes  No

Click Yes, only if NCDMS is the applicant or co-applicant.

#### Is this project a public transportation project?\*

Yes  No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

#### Is this a NCDOT Project?\*

Yes  No

#### (NCDOT only) T.I.P. or state project number:

BR-0033

#### WBS #\*

67033.1.1

(for NCDOT use only)

#### 1a. Type(s) of approval sought from the Corps:\*

- Section 404 Permit (wetlands, streams and waters, Clean Water Act)  
 Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

#### Has this PCN previously been submitted?\*

Yes  
 No

#### 1b. What type(s) of permit(s) do you wish to seek authorization?\*

- Nationwide Permit (NWP)  
 Regional General Permit (RGP)  
 Standard (IP)

#### 1c. Has the NWP or GP number been verified by the Corps?\*

Yes  No

Nationwide Permit (NWP) Number:

14 - Linear transportation

#### NWP Numbers (for multiple NWPS):

List all NW numbers you are applying for not on the drop down list.

#### 1d. Type(s) of approval sought from the DWR:\*

check all that apply

- 401 Water Quality Certification - Regular  
 Non-404 Jurisdictional General Permit  
 Individual 401 Water Quality Certification  
 401 Water Quality Certification - Express  
 Riparian Buffer Authorization

### Pre-Filing Meeting Information

Before submitting this form please ensure you have submitted the Pre-Filing Meeting Request Form as we will not be able to accept your application without this important first step. The Pre-Filing Meeting Request Form is used in accordance with 40 C.F.R. Section 121.4(a) "At least 30 days prior to submitting a certification request, the project proponent shall request a pre-filing meeting with the certifying agency" and in accordance with 40 C.F.R. Section 121.5(b)(7), and (c)(5) all certification requests shall include documentation that a pre-filing meeting request was submitted to the certifying

authority at least 30 days prior to submitting the certification request. Click [here](#) to read more information on when this form is needed prior to application submission or [here](#) to view the form.

**Is this a courtesy copy notification? \***

Yes  No

**ID#**

20210552

**Version**

1

**Pre-filing Meeting or Request Date \***

3/10/2021

**Attach documentation of Pre-Filing Meeting Request here: \***

[Click the upload button or drag and drop files here to attach document](#)

BR-0033 Pre-Filing Information.pdf

138.7KB

File type must be PDF

**1e. Is this notification solely for the record because written approval is not required? \***

**For the record only for DWR 401 Certification:**

Yes  No

**For the record only for Corps Permit:**

Yes  No

**1f. Is this an after-the-fact permit application? \***

Yes  No

**1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? \***

[If so, attach the acceptance letter from mitigation bank or in-lieu fee program](#)

Yes  No

**Acceptance Letter Attachment**

[Click the upload button or drag and drop files here to attach document](#)

FILE TYPE MUST BE PDF

**1h. Is the project located in any of NC's twenty coastal counties? \***

Yes  No

**1j. Is the project located in a designated trout watershed? \***

Yes  No

You must submit a copy of the appropriate Wildlife Resource Commission Office.

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

## B. Applicant Information

**1a. Who is the Primary Contact? \***

NCDOT

**1b. Primary Contact Email: \***

jhemphill@ncdot.gov

**1c. Primary Contact Phone: \***

(xxx)xxx-xxxx  
(919)219-8581

**1d. Who is applying for the permit? \***

Owner

[\(Check all that apply\)](#)

Applicant (other than owner)

**1e. Is there an Agent/Consultant for this project? \***

Yes  No

## 2. Owner Information

**2a. Name(s) on recorded deed: \***

N/A

**2b. Deed book and page no.:**

**2c. Contact Person:**

[\(for Corporations\)](#)

**2d. Address \***

Street Address

N/A

Address Line 2

City

n/a

Postal / Zip Code

n/a

State / Province / Region

n/a

Country

n/a

**2e. Telephone Number: \***

(xxx)xxx-xxxx

(919)707-7050

**2f. Fax Number:**

(xxx)xxx-xxxx

**2g. Email Address: \***

pharris@ncdot.gov

**3. Applicant Information (if different from owner)**

**3a. Name: \***

NCDOT

**3b. Business Name:**

(if applicable)

**3c. Address \***

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

US

**3d. Telephone Number: \***

(919)707-6110

(xxx)xxx-xxxx

**3e. Fax Number:**

(xxx)xxx-xxxx

**3f. Email Address: \***

jhemphill@ncdot.gov

**C. Project Information and Prior Project History**

**1. Project Information**

**1a. Name of project: \***

Replacement of Bridge No. 580084 on SR 1234 (Parker Padgett Rd) over I-40 in McDowell County

**1b. Subdivision name:**

(if appropriate)

**1c. Nearest municipality / town: \***

Old Fort

**2. Project Identification**

**2a. Property Identification Number:**

(tax PIN or parcel ID)

**2b. Property size:**

(in acres)

**2c. Project Address**

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

**2d. Site coordinates in decimal degrees**

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

**Latitude: \***

35.63641

ex: 34.208504

**Longitude: \***

-82.14360

-77.796371

### 3. Surface Waters

**3a. Name of the nearest body of water to proposed project:\***

Catawba River

**3b. Water Resources Classification of nearest receiving water:\***

C

[Surface Water Lookup](#)

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**3c. What river basin(s) is your project located in?\***

Catawba

**3d. Please provide the 12-digit HUC in which the project is located.\***

030501010105

[River Basin Lookup](#)

### 4. Project Description and History

**4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application:\***

Existing bridge: Superstructure is a 4 span (1 @ 60'-6" , 1 @ 67' , 1 @ 55' , 1 @ 50') - reinforced concrete deck with 4 rows of 36" steel I-beams ; Deck width from curb to curb: 28' Substructure – End Bents – Reinforced concrete with steel H-piles with slopes; Bents: 3 concrete caps with 2 – 2.5' diameter concrete columns. The site is a rural interchange surrounded by cultivated and undeveloped land with one business nearby.  
The jurisdictional resource impact site is not located at the bridge replacement, but at an adjacent exit ramp.

**4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past?\***

Yes  No  Unknown

**4f. List the total estimated acreage of all existing wetlands on the property:**

0

**4g. List the total estimated linear feet of all existing streams on the property:**

(intermittent and perennial)

158'

**4h. Explain the purpose of the proposed project:\***

NCDOT Bridge Management Unit records indicate Bridge 580084 was built in 1958 and is structurally deficient with a sufficiency rating of 51.39. Deterioration of concrete in Bent Caps 2 and 3 have led to a determination of Priority Maintenance as the bridge is approaching the end of its useful life.

**4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used:\***

The existing 233', 4 span reinforced concrete bridge with steel I-beams is being replaced with a 209 foot, 2-span reinforced concrete bridge with steel piles and girders. The existing bridge will be removed, and the proposed bridge will be placed east of the existing alignment, keeping the existing bridge during construction as a detour bridge. Standard road and bridge building equipment such as trucks, dozers, and cranes will be used.

### 5. Jurisdictional Determinations

**5a. Have the wetlands or streams been delineated on the property or proposed impact areas?\***

Yes  No  Unknown

**Comments:**

**5b. If the Corps made a jurisdictional determination, what type of determination was made?\***

Preliminary  Approved  Not Verified  Unknown  N/A

**Corps AID Number:**

Example: SAW-2017-99999

**5c. If 5a is yes, who delineated the jurisdictional areas?**

Name (if known): Scott Shifflet

Agency/Consultant Company: ATCS

Other:

### 6. Future Project Plans

**6a. Is this a phased project?\***

Yes  No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

## D. Proposed Impacts Inventory



## 1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

- Wetlands  Streams-tributaries  Buffers  
 Open Waters  Pond Construction

## 3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact* (?)	3b. Impact type *	3c. Type of impact *	3d. S. name *	3e. Stream Type* (?)	3f. Type of Jurisdiction *	3g. S. width* Average (feet)	3h. Impact length* (linear feet)
S1	Lateral Base Ditch	Permanent	Relocation	UT to Catawba River	Intermittent	Corps	2 Average (feet)	109 (linear feet)
S2	Lateral Base Ditch	Temporary	Stabilization	UT to Catawba River	Intermittent	Corps	2 Average (feet)	20 (linear feet)

\*\* All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

109

3i. Total temporary stream impacts:

20

3i. Total stream and ditch impacts:

129

3j. Comments:

This stream is barely jurisdictional (21.75) with no aquatic life found at the time of the survey.

## E. Impact Justification and Mitigation

### 1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: \*

A design exception was utilized to lower the design speed, shorten the vertical curves, and increase the approach grade to the structure. This was done to minimize the length of the project to avoid the adjacent bridge over the Catawba River. This design also minimized impacts to the gas station property.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: \*

Best Management Practices will be adhered to.

### 2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

- Yes  No

2b. If this project DOES NOT require Compensatory Mitigation, explain why:

The current intermittent, channelized linear ditch will be relocated in a similar lateral base ditch feature. An NCSAM form (attached) determined a low to medium quality for the stream.

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

## F. Stormwater Management and Diffuse Flow Plan (required by DWR)

\*\*\* Recent changes to the stormwater rules have required updates to this section .\*\*\*

### 1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

- Yes  No

For a list of options to meet the diffuse flow requirements, click [here](#).

If no, explain why:

### 2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? \*

Yes  No

Comments:

## G. Supplementary Information

### 1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? \*

Yes  No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? \*

Yes  No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) \*

Yes  No

### 2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? \*

Yes  No

### 3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? \*

Yes  No

3b. If you answered "no," provide a short narrative description.

Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.

### 4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? \*

Yes  No  NA

### 5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? \*

Yes  No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? \*

Yes  No

5c. If yes, indicate the USFWS Field Office you have contacted.

Asheville

5d. Is another Federal agency involved? \*

Yes  No  Unknown

5e. Is this a DOT project located within Division's 1-8? \*

Yes  No

5f. Will you cut any trees in order to conduct the work in waters of the U.S.? \*

Yes  No

5g. Does this project involve bridge maintenance or removal? \*

Yes  No

5g(1). If yes, have you inspected the bridge for signs of bat use such as staining, guano, bats, etc.? Representative photos of signs of bat use can be found in the NLEB SLOPES, Appendix F, pages 3-7.

Yes  No

Link to the NLEB SLOPES document: [http://saw-reg.usace.army.mil/NLEB/1-30-17-signed\\_NLEB-SLOPES&apps.pdf](http://saw-reg.usace.army.mil/NLEB/1-30-17-signed_NLEB-SLOPES&apps.pdf)

If you answered "Yes" to 5g(1), did you discover any signs of bat use? \*

Yes  No  Unknown

\*\*\* If yes, please show the location of the bridge on the permit drawings/project plans.

5h. Does this project involve the construction/installation of a wind turbine(s)? \*

Yes  No

5i. Does this project involve (1) blasting, and/or (2) other percussive activities that will be conducted by machines, such as jackhammers, mechanized pile drivers, etc.? \*

Yes  No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? \*

FWS Website The only species with habitat on the project are NLEB & Gray bat - An August 22, 2018 Bat memo reported suitable roosting habitat for NLEB and Gray bat on the bridge but no signs of bat use. In 2020, gray bats were found roosting on a bridge over I-40 approximately 15 miles to the east of this project. A resurvey of the project bridge in 2021 found no evidence of bat use.

## 6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? \*

Yes  No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? \*

Review of on-line mapping sources

## 7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? \*

Yes  No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? \*

MCDC, State Historic Preservation Office Memo and Archaeology Memo. Additional Tribal Coordination letters requesting comment were sent July 14, 2021, to the Catawba, United Keetoowah Band of Cherokee, and Cherokee Nation tribes. Responses are included in this application package. The Eastern Band of Cherokee Indians were contacted in 2018 with no reply received.

## 8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? \*

Yes  No

8c. What source(s) did you use to make the floodplain determination? \*

FEMA Flood Maps

## Miscellaneous

### Comments

Approximately 0.07 acre of trees will be cut for this project. Percussive activities may be involved in bridge demolition and construction.

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

Click the upload button or drag and drop files here to attach document

BR-0033_Final_MCDC_Package_4.8.2019 Signed.pdf	4.19MB
BR-0033 Permit Drawings 2021.05.10.pdf	2.94MB
BR-0033 Catawba Response.pdf	173.9KB
BR-0033 Muscogee (Creek) Nation Response.pdf	141.24KB
BR-0033 Cover Letter.pdf	298.31KB
BR-0033 NLEB and Gray Bat - SLOPES.pdf	258.07KB
BR-0033 SAM Forms.pdf	283.81KB

File must be PDF or KMZ

## Signature

\*

By checking the box and signing below, I certify that:

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief; and
- The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: \*

Michael Anthony Turchy

Signature \*

*Michael Anthony Turchy*

**Date**

9/16/2021

**Pre-Filing Meeting Review Completed for BR-0033 - 20210552 Ver 1**

laserfiche@ncdenr.gov <laserfiche@ncdenr.gov>

Sat 4/10/2021 12:00 AM

To: Turchy, Michael A <maturchy@ncdot.gov>

Cc: Mitchell, Robert K <kevin.mitchell@ncdenr.gov>

The North Carolina Division of Water Resources has received the Pre-Filing Meeting Request Form for BR-0033 that you submitted on 3/10/2021 9:37 PM. The ID number for that project is 20210552, Version 1.

It has been decided that no meeting is needed for this project.

Review Comments (If provided):

Project file link: <https://edocs.deq.nc.gov/WaterResources/Browse.aspx?dbid=0&startid=1677447>

When you submit your application please upload a copy of the attached document in this email.

This email was automatically generated by Laserfiche workflow. Please do not respond to this email address, as responses are not monitored.

## Pre-Filing Meeting Request Submittal for BR-0033

laserfiche@ncdenr.gov <laserfiche@ncdenr.gov>

Wed 3/10/2021 9:38 PM

To: Turchy, Michael A <maturchy@ncdot.gov>

 1 attachments (51 KB)

DWR Pre-Filing Meeting Request Form.pdf;

**The North Carolina Division of Water Resources has received the Pre-Filing Meeting Request Form for BR-0033 that you submitted on 3/10/2021. Attached is a copy of your initial request.**

***This email was automatically generated by Laserfiche workflow. Please do not respond to this email address, as responses aren't monitored.***

# DWR Pre-Filing Meeting Request Form



**Contact Name \*** Michael Turchy

**Contact Email Address \*** maturchy@ncdot.gov

**Project Owner \*** NCDOT

**Project Name \*** BR-0033

**Project County \*** McDowell

**Owner Address: \***

<b>Street Address</b>	
1598 Mail Service Center	
<b>Address Line 2</b>	
<b>City</b>	<b>State / Province / Region</b>
Raleigh	NC
<b>Postal / Zip Code</b>	<b>Country</b>
27699	US

**Is this a transportation project? \***  Yes  No

## Type(s) of approval sought from the DWR:

- 401 Water Quality Certification - Regular  401 Water Quality Certification - Express
- Individual Permit  Modification
- Shoreline Stabilization

**Does this project have an existing project ID#? \***

Yes  No

**Do you know the name of the staff member you would like to request a meeting with?**

no meeting requested

**Please give a brief project description below. \***

Replacement of Bridge 84 on SR 1234 over I-40.

Please give a couple of dates you are available for a meeting.

---

**Please attach the documentation you would like to have the meeting about.**

pdf only

**By digitally signing below, I certify that I have read and understood that per the Federal Clean Water Act Section 401 Certification Rule the following statements:**

- This form completes the requirement of the Pre-Filing Meeting Request in the Clean Water Act Section 401 Certification Rule.

- I understand by signing this form that I cannot submit my application until 30 calendar days after this pre-filing meeting request.
- I also understand that DWR is not required to respond or grant the meeting request.

Your project's thirty-day clock started upon receipt of this application. You will receive notification regarding meeting location and time if a meeting is necessary. You will receive notification when the thirty-day clock has expired, and you can submit an application.

**Signature \***

A rectangular box containing a handwritten signature in cursive script that reads "Michael Turchy".

**Submittal Date**

3/10/2021

		North Carolina Department of Transportation Highway Stormwater Program <b>STORMWATER MANAGEMENT PLAN</b> FOR NCDOT PROJECTS				
(Version 2.08; Released April 2018)						
WBS Element: 67033.1.1		TIP No.: BR-0033	County(ies): McDowell		Page 1 of 1	
General Project Information						
WBS Element:		67033.1.1	TIP Number:	BR-0033	Project Type:	Bridge Replacement
NCDOT Contact:		Tierre Peterson, PE		Contractor / Designer:		TGS Engineers (Rusty Lassiter)
Address:		1000 Birch Ridge Drive Raleigh NC 27610		Address:		706 Hillsborough Street Suite 200 Raleigh, NC 27603
Phone:		919-707-6488		Phone:		919-773-8887 ext. 121
Email:		trpeterson@ncdot.gov		Email:		rlassiter@tgsengineers.com
City/Town:		Old Fort		County(ies):		McDowell
River Basin(s):		Catawba		CAMA County?		No
Wetlands within Project Limits?		No				
Project Description						
Project Length (lin. miles or feet):		0.156 miles	Surrounding Land Use:		Rural; Farmland; Foothills	
Project Built-Up Area (ac.):		1.4 ac.		Existing Site		1.1 ac.
Typical Cross Section Description:		Two 12 foot paved lanes with a 16 foot paved turn lane in the middle.			Two 11 foot paved lanes	
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 3140	Year: 2041	Existing:	2410	Year: 2021
		Replace bridge #580084 on SR 1234 (Parker Padgett Rd) over I-40 in McDowell. 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. 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 be replaced in a new location using the existing bridge as an on-site detour.				
Waterbody Information						
Surface Water Body (1):		Catawba		NCDWR Stream Index No.:		11-(8)
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C		
		Supplemental Classification:				
Other Stream Classification:						
Impairments:		None				
Aquatic T&E Species?		No				
NRTR Stream ID:		N/A				
Project Includes Bridge Spanning Water Body?		No	Deck Drains Discharge Over Buffer?		N/A	
Deck Drains Discharge Over Water Body?		No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)						
WBS Element: 67033.1.1		TIP No.: BR-0033	County(ies): McDowell		Page 1 of 1	
Additional Waterbody Information						
Surface Water Body (2):				NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body		Primary Classification:				
		Supplemental Classification:				
Other Stream Classification:						
Impairments:						
Aquatic T&E Species?		Comments:				
NRTR Stream ID:						
Project Includes Bridge Spanning Water Body?			Deck Drains Discharge Over Buffer?			
Deck Drains Discharge Over Water Body?			(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)						

09.08/99

See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Plan Sheet Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MCDOWELL COUNTY**

**LOCATION: REPLACE BRIDGE NO. 84  
ON SR 1234 (PARKER PADGETT RD.) OVER I-40**

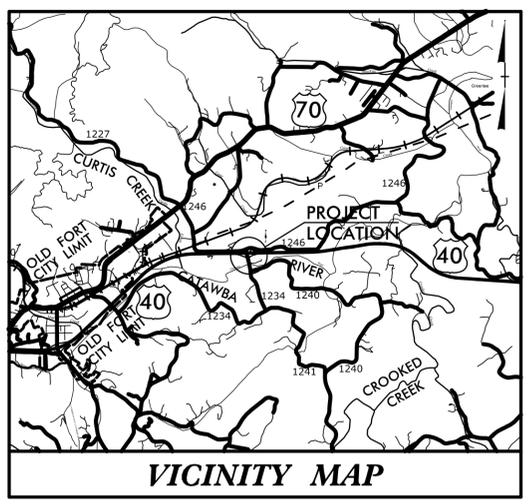
**TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>BR-0033</b>	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67033.1.1	N/A	P.E.	
67033.2.1	N/A	RW & UTILITIES	

**RW PLANS**

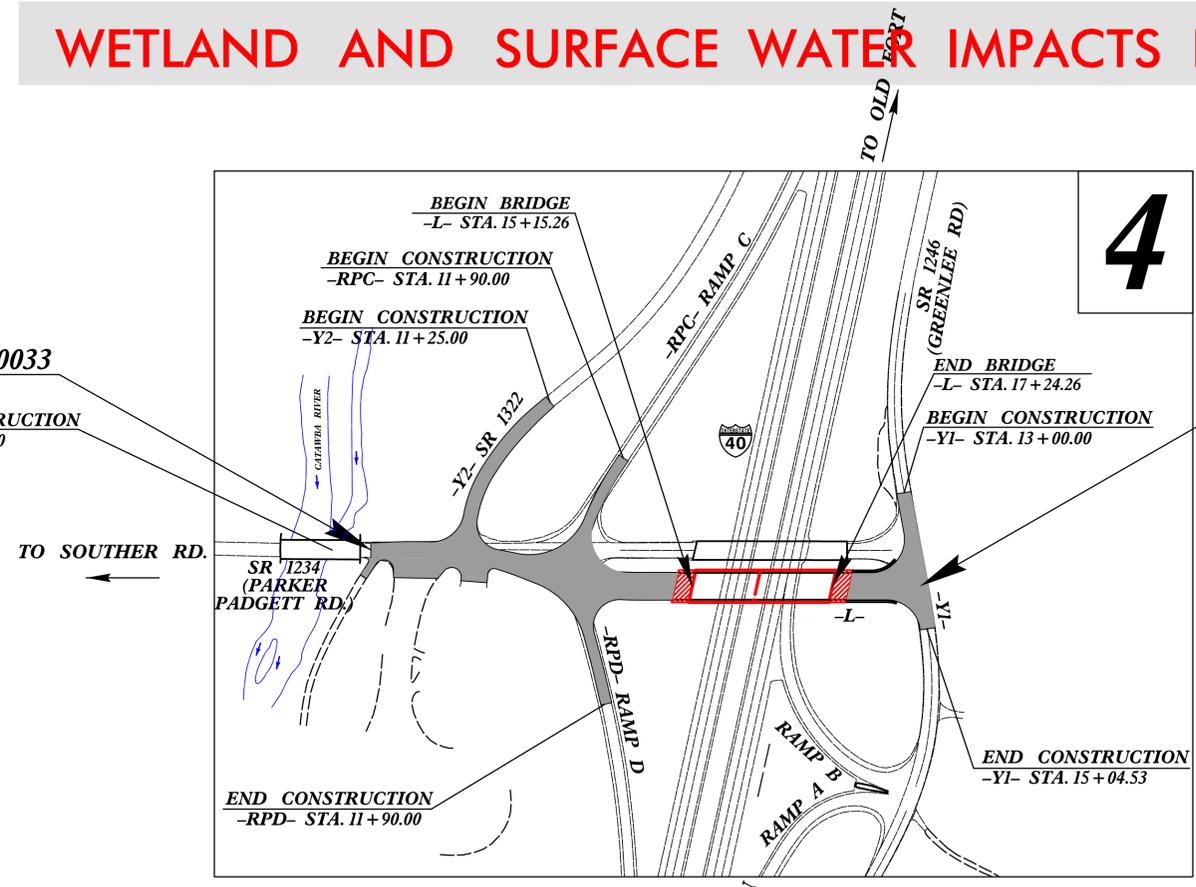


**TIP PROJECT: BR-0033**



**WETLAND AND SURFACE WATER IMPACTS PERMIT**

**BEGIN TIP PROJECT BR-0033**  
-L- POT STA. 10 + 30.00  
BEGIN CONSTRUCTION  
-L- STA. 9 + 70.00



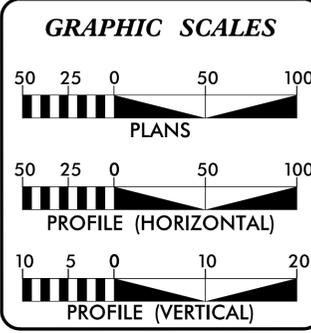
**END TIP PROJECT BR-0033**  
-L- POT STA. 18 + 54.66

**PERMIT DRAWING  
SHEET 1 OF 5**

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARY.  
THERE IS PARTIAL CONTROL ACCESS ON THIS PROJECT.  
DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, MAXIMUM GRADE, HORIZONTAL & VERTICAL CURVES AND VERTICAL STOPPING SIGHT DISTANCE.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**DESIGN DATA**

ADT 2021 =	2410
ADT 2041 =	3140
K =	13 %
D =	70 %
T =	6 % *
V =	60 MPH
* TTST 3%+ DUAL 3%	
FUNC CLASS =	LOCAL
REGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT BR-0033	=	0.116 MILES
LENGTH STRUCTURE TIP PROJECT BR-0033	=	0.040 MILES
TOTAL LENGTH TIP PROJECT BR-0033	=	0.156 MILES

Prepared for NCDOT in the Office of:  
**ATCS**  
100 REGENCY FOREST DRIVE, SUITE 130  
CARY, NORTH CAROLINA 27518  
919-341-9418 <http://www.atcspic.com/>  
NC LICENSE NO. P-0192

ENGINEERING | PLANNING | SURVEYING | ENVIRONMENTAL

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
MARCH 25, 2021

**LETTING DATE:**  
FEBRUARY 15, 2022

**TIM HAYES, PE**  
PROJECT ENGINEER

**JASON BREDI, PE**  
PROJECT DESIGN ENGINEER

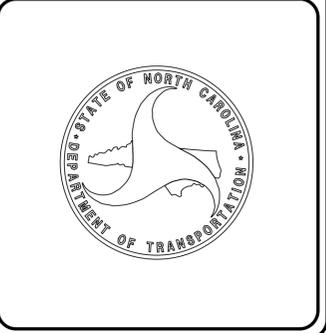
**DAVID STUTTS, PE**  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



5/10/2021 X:\NCDOT\Consultants\ATCS\BR-0033\Hydraulics\PERMITS\_Environmental\Drawings\BR0033\_Rdy\_tsh.dgn User:rdstt

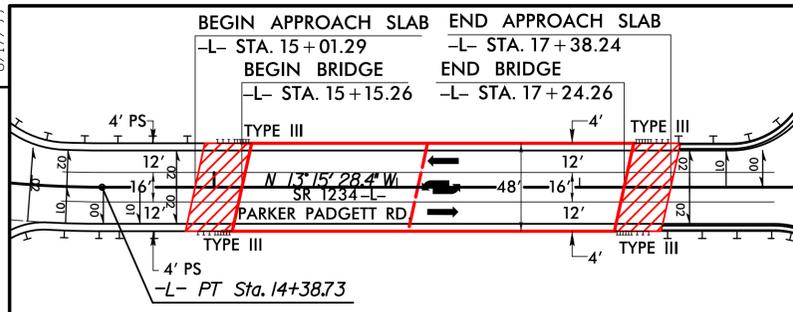
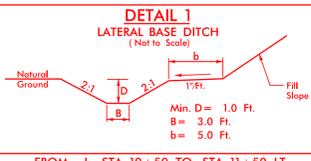
PROJECT REFERENCE NO. BR-0033	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
<b>ATCS</b> <small>100 REGENCY FOREST DRIVE, SUITE 130 CARY, NORTH CAROLINA 27518 919-341-9418 http://www.atcsplc.com/</small>	
ENGINEERING   PLANNING   SURVEYING   ENVIRONMENTAL	

PERMIT DRAWING  
SHEET 2 OF 5

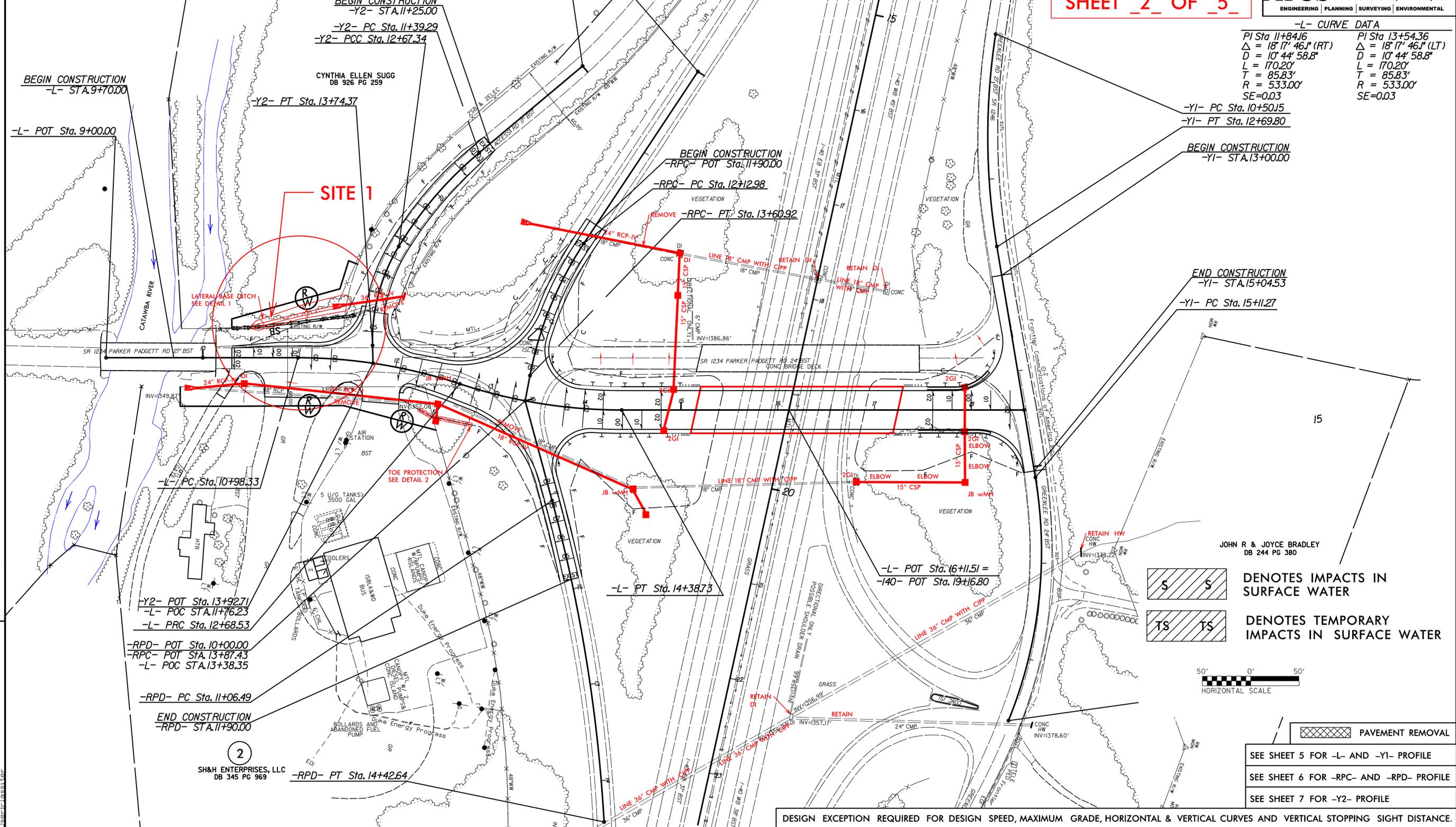


-Y2- CURVE DATA		-RPC- CURVE DATA		-RPD- CURVE DATA	
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$\Delta = 18^{\circ} 43' 38.8''$ (LT)	$\Delta = 32^{\circ} 58' 38.8''$ (LT)	$\Delta = 22^{\circ} 50' 52.6''$ (LT)	$\Delta = 11^{\circ} 53' 00.3''$ (RT)	$\Delta = 11^{\circ} 53' 00.3''$ (RT)	$\Delta = 11^{\circ} 53' 00.3''$ (RT)
D = 1437' 30.8"	D = 3048' 46.7"	D = 1526' 37.0"	D = 336.15'	D = 336.15'	D = 336.15'
L = 128.05'	L = 107.02'	L = 147.94'	L = 336.15'	L = 336.15'	L = 336.15'
T = 64.60'	T = 55.04'	T = 74.97'	T = 168.68'	T = 168.68'	T = 168.68'
R = 391.76'	R = 185.95'	R = 371.00'	R = 1620.76'	R = 1620.76'	R = 1620.76'

-L- CURVE DATA		-Y1- CURVE DATA	
PI Sta 11+84.16	PI Sta 13+54.36	PI Sta 10+50.15	PI Sta 13+54.36
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D = 1044' 58.8"	D = 1044' 58.8"	PI Sta 15+04.53	D = 1044' 58.8"
L = 170.20'	L = 170.20'	PI Sta 15+11.27	L = 170.20'
T = 85.83'	T = 85.83'		T = 85.83'
R = 533.00'	R = 533.00'		R = 533.00'
SE=0.03	SE=0.03		SE=0.03



PS - PAVED SHOULDER  
SKETCH SHOWING BRIDGEROADWAY RELATIONSHIP



**S** DENOTES IMPACTS IN SURFACE WATER  
**TS** DENOTES TEMPORARY IMPACTS IN SURFACE WATER



**X** PAVEMENT REMOVAL

SEE SHEET 5 FOR -L- AND -Y1- PROFILE  
SEE SHEET 6 FOR -RPC- AND -RPD- PROFILE  
SEE SHEET 7 FOR -Y2- PROFILE

DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, MAXIMUM GRADE, HORIZONTAL & VERTICAL CURVES AND VERTICAL STOPPING SIGHT DISTANCE.

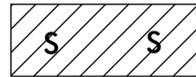
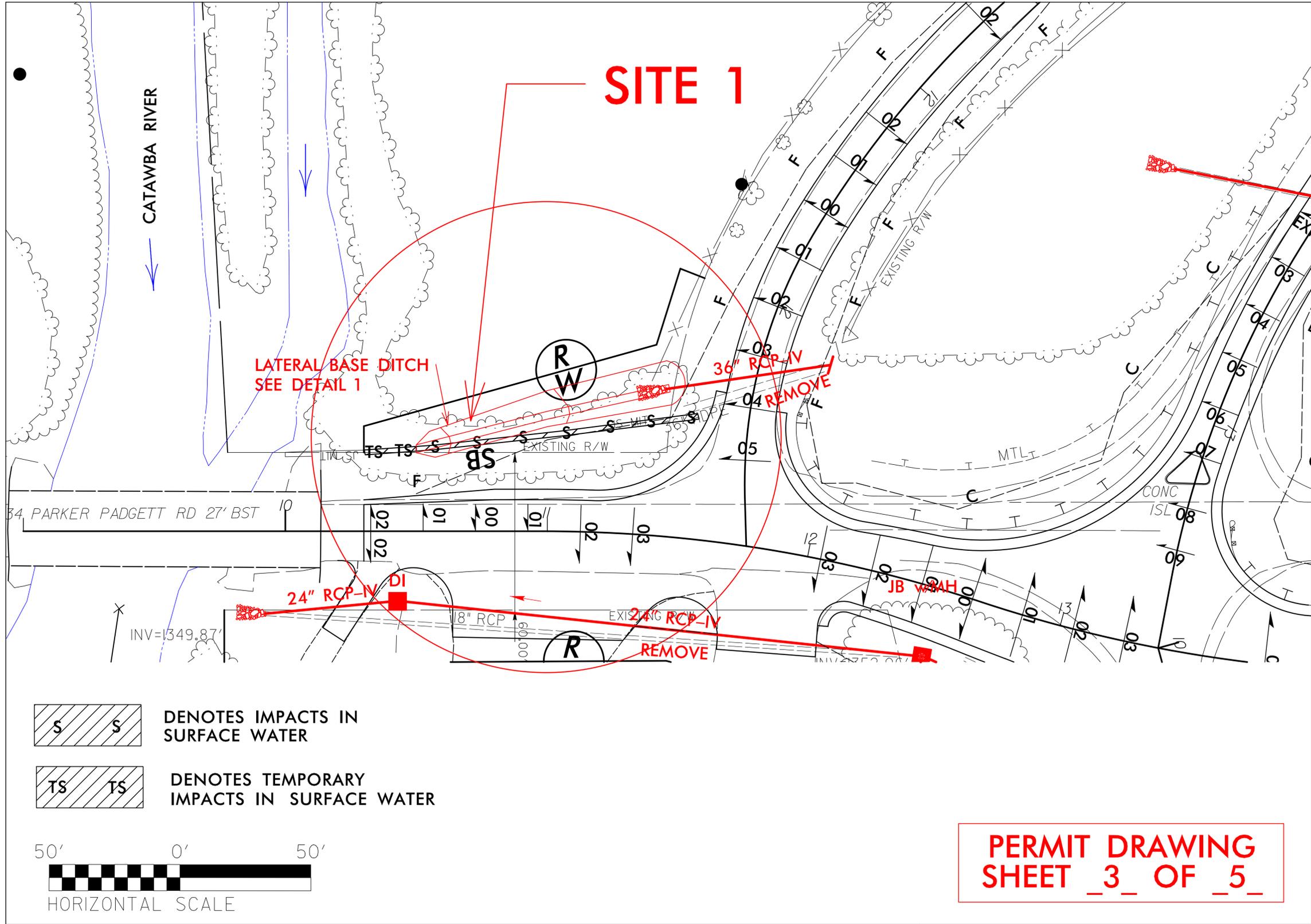
REVISIONS

5/10/2021  
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**2**  
SH&H ENTERPRISES, LLC  
DB 345 PG 969

**1**  
CYNTHIA ELLEN SUGG  
DB 926 PG 259

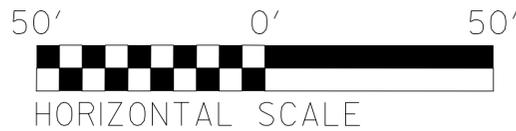
JOHN R & JOYCE BRADLEY  
DB 244 PG 380



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



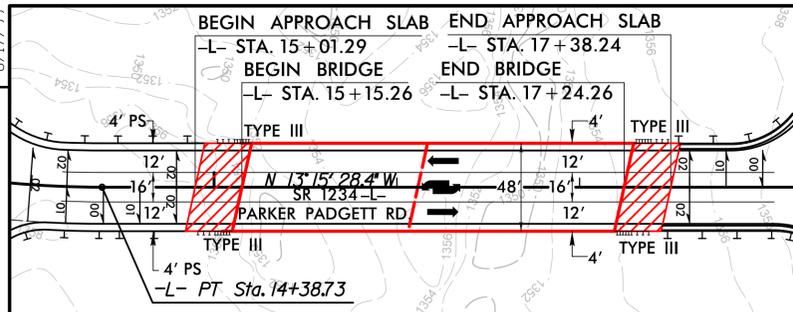
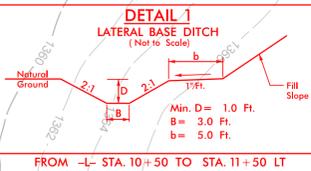
**PERMIT DRAWING  
SHEET 3 OF 5**

PROJECT REFERENCE NO. BR-0033	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
<small>100 REGENCY FOREST DRIVE, SUITE 130 CARY, NORTH CAROLINA 27518 919-341-9418 http://www.atcsinc.com</small>	
ENGINEERING   PLANNING   SURVEYING   ENVIRONMENTAL	

PERMIT DRAWING  
SHEET 4 OF 5



-Y2- CURVE DATA		-RPC- CURVE DATA		-RPD- CURVE DATA	
PI Sta 12+03.89	PI Sta 13+22.38	PI Sta 12+87.95	PI Sta 12+75.17	PI Sta 12+84.16	PI Sta 13+54.36
$\Delta = 18^{\circ} 43' 38.8" (LT)$	$\Delta = 32^{\circ} 58' 38.8" (LT)$	$\Delta = 22^{\circ} 50' 52.6" (LT)$	$\Delta = 11^{\circ} 53' 00.3" (RT)$	$\Delta = 18^{\circ} 17' 46.1" (RT)$	$\Delta = 18^{\circ} 17' 46.1" (LT)$
$D = 14^{\circ} 37' 30.8"$	$D = 30^{\circ} 48' 46.7"$	$D = 15^{\circ} 26' 37.0"$	$D = 3^{\circ} 32' 06.5"$	$D = 10^{\circ} 44' 58.8"$	$D = 10^{\circ} 44' 58.8"$
$L = 128.05'$	$L = 107.02'$	$L = 147.94'$	$L = 336.15'$	$L = 170.20'$	$L = 170.20'$
$T = 64.60'$	$T = 55.04'$	$T = 74.97'$	$T = 168.68'$	$T = 85.83'$	$T = 85.83'$
$R = 391.76'$	$R = 185.95'$	$R = 371.00'$	$R = 1620.76'$	$R = 533.00'$	$R = 533.00'$
				$SE=0.03$	$SE=0.03$



PS = PAVED SHOULDER  
SKETCH SHOWING BRIDGEROADWAY RELATIONSHIP

FROM -L- STA 10+50 TO STA 11+50 LT  
-RPC- POT Sta. 10+00.00  
-Y2- POT Sta. 10+00.00

1  
CYNTHIA ELLEN SUGG  
DB 926 PG 259

BEGIN CONSTRUCTION  
-Y2- STA. 11+25.00  
-Y2- PC Sta. 11+39.29  
-Y2- POC Sta. 12+67.34

BEGIN CONSTRUCTION  
-L- STA. 9+70.00  
-L- POT Sta. 9+00.00

-Y2- PT Sta. 13+74.37

BEGIN CONSTRUCTION  
-RPC- POT Sta. 11+90.00  
-RPC- PC Sta. 12+12.98

-RPC- PT Sta. 13+60.92

BEGIN CONSTRUCTION  
-YI- STA. 13+00.00

END CONSTRUCTION  
-YI- STA. 15+04.53

-YI- PC Sta. 15+11.27

-L- PC Sta. 10+98.33

-Y2- POT Sta. 13+92.71  
-L- POC Sta. 11+76.23  
-L- PRC Sta. 12+68.53

-RPD- POT Sta. 10+00.00  
-RPC- POT Sta. 13+87.43  
-L- POC Sta. 13+38.35

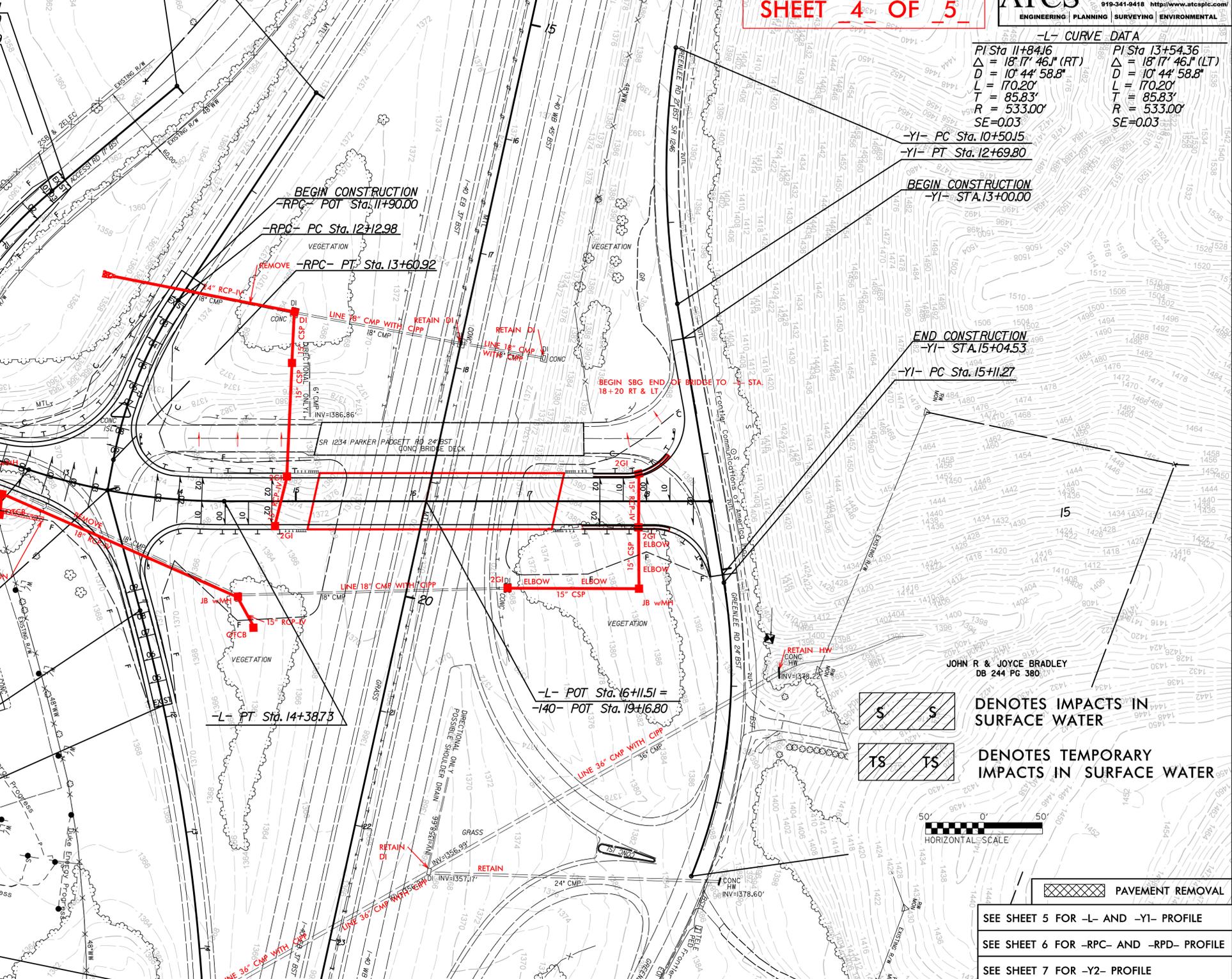
-RPD- PC Sta. 11+06.49

END CONSTRUCTION  
-RPD- STA. 11+90.00

-RPD- PT Sta. 14+42.64

2  
SH&H ENTERPRISES, LLC  
DB 345 PG 969

5/10/2021  
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DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



HORIZONTAL SCALE



PAVEMENT REMOVAL

SEE SHEET 5 FOR -L- AND -YI- PROFILE  
SEE SHEET 6 FOR -RPC- AND -RPD- PROFILE  
SEE SHEET 7 FOR -Y2- PROFILE

DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, MAXIMUM GRADE, HORIZONTAL & VERTICAL CURVES AND VERTICAL STOPPING SIGHT DISTANCE.



**NC SAM Stream Rating Sheet**  
**Accompanies User Manual Version 2.1**

Stream Site Name BR-0033  
 Stream Category Mb2

Date of Evaluation 08/05/2021  
 Assessor Name/Organization Jeff Hemphill

Notes of Field Assessment Form (Y/N) NO  
 Presence of regulatory considerations (Y/N) NO  
 Additional stream information/supplementary measurements included (Y/N) NO  
 NC SAM feature type (perennial, intermittent, Tidal Marsh Stream) Intermittent

<b>Function Class Rating Summary</b>	<b>USACE/ All Streams</b>	<b>NCDWR Intermittent</b>
(1) Hydrology		
(2) Baseflow	<b>LOW</b>	<b>MEDIUM</b>
(2) Flood Flow		
(3) Streamside Area Attenuation		
(4) Floodplain Access	<b>LOW</b>	<b>LOW</b>
(4) Wooded Riparian Buffer		
(4) Microtopography	NA	NA
(3) Stream Stability	<b>LOW</b>	<b>LOW</b>
(4) Channel Stability	<b>LOW</b>	<b>LOW</b>
(4) Sediment Transport	<b>LOW</b>	<b>LOW</b>
(4) Stream Geomorphology	<b>LOW</b>	<b>LOW</b>
(2) Stream/Intertidal Zone Interaction	NA	NA
(2) Longitudinal Tidal Flow	NA	NA
(2) Tidal Marsh Stream Stability	NA	NA
(3) Tidal Marsh Channel Stability	NA	NA
(3) Tidal Marsh Stream Geomorphology	NA	NA
(1) Water Quality		
(2) Baseflow	<b>LOW</b>	<b>MEDIUM</b>
(2) Streamside Area Vegetation	<b>MEDIUM</b>	<b>MEDIUM</b>
(3) Upland Pollutant Filtration	<b>MEDIUM</b>	<b>MEDIUM</b>
(3) Thermoregulation	<b>MEDIUM</b>	<b>MEDIUM</b>
(2) Indicators of Stressors	<b>YES</b>	<b>YES</b>
(2) Aquatic Life Tolerance		NA
(2) Intertidal Zone Filtration	NA	NA
(1) Habitat	<b>LOW</b>	<b>LOW</b>
(2) In-stream Habitat	<b>LOW</b>	<b>LOW</b>
(3) Baseflow	<b>LOW</b>	<b>MEDIUM</b>

NC SAM FIELD ASSESSMENT FORM  
Accompanies User Manual Version 2.1

USACE AID #:

NCDWR #:

**INSTRUCTIONS:** Attach a sketch of the assessment area and photographs. Attach a copy of the USGS 7.5-minute topographic quadrangle, and circle the location of the stream reach under evaluation. If multiple stream reaches will be evaluated on the same property, identify and number all reaches on the attached map, and include a separate form for each reach. See the NC SAM User Manual for detailed descriptions and explanations of requested information. Record in the "Notes/Sketch" section if any supplementary measurements were performed. See the NC SAM User Manual for examples of additional measurements that may be relevant.

**NOTE EVIDENCE OF STRESSORS AFFECTING THE ASSESSMENT AREA (do not need to be within the assessment area).**

**PROJECT / SITE INFORMATION:**

1. Project name (if any): BR-0033  
2. Date of evaluation: 08/05/2021  
3. Applicant/owner name: NCDOT  
4. Assessor name/organization: Jeff Hemphill  
5. County: McDowell  
6. Nearest named water body on USGS 7.5-minute quad: Catawba river  
7. River Basin: Catawba  
8. Site coordinates (decimal degrees, at lower end of assessment reach):

**STREAM INFORMATION: (depth and width can be approximations)**

9. Site number (show on attached map): SB  
10. Length of assessment reach evaluated (feet): 100  
11. Channel depth from bed (in riffle, if present) to top of bank (feet): 7'  Unable to assess channel depth.  
12. Channel width at top of bank (feet): 10  
13. Is assessment reach a swamp stream?  Yes  No  
14. Feature type:  Perennial flow  Intermittent flow  Tidal Marsh Stream

**STREAM RATING INFORMATION:**

15. NC SAM Zone:  Mountains (M)  Piedmont (P)  Inner Coastal Plain (I)  Outer Coastal Plain (O)

16. Estimated geomorphic valley shape (skip for Tidal Marsh Stream):  
 a (more sinuous stream, flatter valley slope)  b (less sinuous stream, steeper valley slope)  
17. Watershed size: (skip for Tidal Marsh Stream)  
 Size 1 (< 0.1 mi<sup>2</sup>)  Size 2 (0.1 to < 0.5 mi<sup>2</sup>)  Size 3 (0.5 to < 5 mi<sup>2</sup>)  Size 4 (≥ 5 mi<sup>2</sup>)

**ADDITIONAL INFORMATION:**

18. Were regulatory considerations evaluated?  Yes  No If Yes, check all that apply to the assessment area.  
 Section 10 water  Classified Trout Waters  Water Supply Watershed (  I  II  III  IV  V )  
 Essential Fish Habitat  Primary Nursery Area  High Quality Waters/Outstanding Resource Waters  
 Publicly owned property  NCDWR riparian buffer rule in effect  Nutrient Sensitive Waters  
 Anadromous fish  303(d) List  CAMA Area of Environmental Concern (AEC)  
 Documented presence of a federal and/or state listed protected species within the assessment area.  
List species: \_\_\_\_\_  
 Designated Critical Habitat (list species): \_\_\_\_\_

19. Are additional stream information/supplementary measurements included in "Notes/Sketch" section or attached?  Yes  No

**1. Channel Water – assessment reach metric (skip for Size 1 streams and Tidal Marsh Streams)**

- A Water throughout assessment reach.  
 B No flow, water in pools only.  
 C No water in assessment reach.

**2. Evidence of Flow Restriction – assessment reach metric**

- A At least 10% of assessment reach in-stream habitat or riffle-pool sequence is adversely affected by a flow restriction or fill to the point of obstructing flow or a channel choked with aquatic macrophytes or ponded water or impounded on flood or ebb within the assessment reach (examples: undersized or perched culverts, causeways that constrict the channel, tidal gates).  
 B Not A

**3. Feature Pattern – assessment reach metric**

- A A majority of the assessment reach has altered pattern (examples: straightening, modification above or below culvert).  
 B Not A.

**4. Feature Longitudinal Profile – assessment reach metric**

- A Majority of assessment reach has a substantially altered stream profile (examples: channel down-cutting, existing damming, over widening, active aggradation, dredging, and excavation where appropriate channel profile has not reformed from any of these disturbances).  
 B Not A

**5. Signs of Active Instability – assessment reach metric**

Consider only current instability, not past events from which the stream has currently recovered. Examples of instability include active bank failure, active channel down-cutting (head-cut), active widening, and artificial hardening (such as concrete, gabion, rip-rap).

- A < 10% of channel unstable  
 B 10 to 25% of channel unstable  
 C > 25% of channel unstable

**6. Streamside Area Interaction – streamside area metric**

Consider for the Left Bank (LB) and the Right Bank (RB).

- LB RB  
 A  A Little or no evidence of conditions that adversely affect reference interaction  
 B  B Moderate evidence of conditions (examples: berms, levees, down-cutting, aggradation, dredging) that adversely affect reference interaction (examples: limited streamside area access, disruption of flood flows through streamside area, leaky or intermittent bulkheads, causeways with floodplain constriction, minor ditching [including mosquito ditching])  
 C  C Extensive evidence of conditions that adversely affect reference interaction (little to no floodplain/intertidal zone access [examples: causeways with floodplain and channel constriction, bulkheads, retaining walls, fill, stream incision, disruption of flood flows through streamside area] or too much floodplain/intertidal zone access [examples: impoundments, intensive mosquito ditching]) or floodplain/intertidal zone unnaturally absent or assessment reach is a man-made feature on an interstream divide

**7. Water Quality Stressors – assessment reach/intertidal zone metric**

Check all that apply.

- A Discolored water in stream or intertidal zone (milky white, blue, unnatural water discoloration, oil sheen, stream foam)  
 B Excessive sedimentation (burying of stream features or intertidal zone)

- C Noticeable evidence of pollutant discharges entering the assessment reach and causing a water quality problem
- D Odor (not including natural sulfide odors)
- E Current published or collected data indicating degraded water quality in the assessment reach. Cite source in the "Notes/Sketch" section.
- F Livestock with access to stream or intertidal zone
- G Excessive algae in stream or intertidal zone
- H Degraded marsh vegetation in the intertidal zone (removal, burning, regular mowing, destruction, etc.)
- I Other: No water but some garbage present (explain in "Notes/Sketch" section)
- J Little to no stressors

**8. Recent Weather – watershed metric**

For Size 1 or 2 streams, D1 drought or higher is considered a drought; for Size 3 or 4 streams, D2 drought or higher is considered a drought.

- A Drought conditions and no rainfall or rainfall not exceeding 1 inch within the last 48 hours
- B Drought conditions and rainfall exceeding 1 inch within the last 48 hours
- C No drought conditions

**9. Large or Dangerous Stream – assessment reach metric**

Yes  No Is stream is too large or dangerous to assess? **If Yes, skip to Metric 13 (Streamside Area Ground Surface Condition).**

**10. Natural In-stream Habitat Types – assessment reach metric**

10a.  Yes  No Degraded in-stream habitat over majority of the assessment reach (examples of stressors include excessive sedimentation, mining, excavation, in-stream hardening [for example, rip-rap], recent dredging, and snagging) **(evaluate for size 4 Coastal Plain streams only, then skip to Metric 12)**

10b. **Check all that occur** (occurs if > 5% coverage of assessment reach) **(skip for Size 4 Coastal Plain streams)**

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> A Multiple aquatic macrophytes and aquatic mosses (include liverworts, lichens, and algal mats)</li> <li><input type="checkbox"/> B Multiple sticks and/or leaf packs and/or emergent vegetation</li> <li><input type="checkbox"/> C Multiple snags and logs (including lap trees)</li> <li><input type="checkbox"/> D 5% undercut banks and/or root mats and/or roots in banks extend to the normal wetted perimeter</li> <li><input checked="" type="checkbox"/> E Little or no habitat</li> </ul> | Check for Tidal<br>Marsh Streams<br>only | <ul style="list-style-type: none"> <li><input type="checkbox"/> F 5% oysters or other natural hard bottoms</li> <li><input type="checkbox"/> G Submerged aquatic vegetation</li> <li><input type="checkbox"/> H Low-tide refugia (pools)</li> <li><input type="checkbox"/> I Sand bottom</li> <li><input type="checkbox"/> J 5% vertical bank along the marsh</li> <li><input type="checkbox"/> K Little or no habitat</li> </ul> |
|--|--|---|

\*\*\*\*\*REMAINING QUESTIONS ARE NOT APPLICABLE FOR TIDAL MARSH STREAMS\*\*\*\*\*

**11. Bedform and Substrate – assessment reach metric (skip for Size 4 Coastal Plain streams and Tidal Marsh Streams)**

11a.  Yes  No Is assessment reach in a natural sand-bed stream? **(skip for Coastal Plain streams)**

11b. Bedform evaluated. **Check the appropriate box(es).**

- A Riffle-run section (evaluate 11c)
- B Pool-glide section (evaluate 11d)
- C Natural bedform absent **(skip to Metric 12, Aquatic Life)**

11c. In riffles sections, check all that occur below the normal wetted perimeter of the assessment reach – whether or not submerged. **Check at least one box in each row (skip for Size 4 Coastal Plain Streams and Tidal Marsh Streams).** Not Present (NP) = absent, Rare (R) = present but ≤ 10%, Common (C) = > 10-40%, Abundant (A) = > 40-70%, Predominant (P) = > 70%. Cumulative percentages should not exceed 100% for each assessment reach.

NP	R	C	A	P	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bedrock/saprolite
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Boulder (256 – 4096 mm)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Cobble (64 – 256 mm)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Gravel (2 – 64 mm)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sand (.062 – 2 mm)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Silt/clay (< 0.062 mm)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Detritus
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Artificial (rip-rap, concrete, etc.)

11d.  Yes  No Are pools filled with sediment? **(skip for Size 4 Coastal Plain streams and Tidal Marsh Streams)**

**12. Aquatic Life – assessment reach metric (skip for Size 4 Coastal Plain streams and Tidal Marsh Streams)**

12a.  Yes  No Was an in-stream aquatic life assessment performed as described in the User Manual?

If No, select one of the following reasons and skip to Metric 13.  No Water  Other: \_\_\_\_\_

12b.  Yes  No Are aquatic organisms present in the assessment reach (look in riffles, pools, then snags)? If Yes, check all that apply. If No, skip to Metric 13.

- 1 >1 Numbers over columns refer to "individuals" for size 1 and 2 streams and "taxa" for size 3 and 4 streams.
- Adult frogs
  - Aquatic reptiles
  - Aquatic macrophytes and aquatic mosses (include liverworts, lichens, and algal mats)
  - Beetles (including water pennies)
  - Caddisfly larvae (Trichoptera [T])
  - Asian clam (*Corbicula*)
  - Crustacean (isopod/amphipod/crayfish/shrimp)
  - Damselfly and dragonfly larvae
  - Dipterans (true flies)
  - Mayfly larvae (Ephemeroptera [E])
  - Megaloptera (alderfly, fishfly, dobsonfly larvae)
  - Midges/mosquito larvae
  - Mosquito fish (*Gambusia*) or mud minnows (*Umbra pygmaea*)
  - Mussels/Clams (not *Corbicula*)
  - Other fish
  - Salamanders/tadpoles
  - Snails
  - Stonefly larvae (Plecoptera [P])
  - Tipulid larvae

Worms/leeches

**13. Streamside Area Ground Surface Condition – streamside area metric (skip for Tidal Marsh Streams and B valley types)**

Consider for the Left Bank (LB) and the Right Bank (RB). Consider storage capacity with regard to both overbank flow and upland runoff.

- |                         |                         |   |
|-------------------------|-------------------------|---|
| LB                      | RB                      |   |
| <input type="radio"/> A | <input type="radio"/> A | Little or no alteration to water storage capacity over a majority of the streamside area  |
| <input type="radio"/> B | <input type="radio"/> B | Moderate alteration to water storage capacity over a majority of the streamside area  |
| <input type="radio"/> C | <input type="radio"/> C | Severe alteration to water storage capacity over a majority of the streamside area (examples include: ditches, fill, soil, compaction, livestock disturbance, buildings, man-made levees, drainage pipes) |

**14. Streamside Area Water Storage – streamside area metric (skip for Size 1 streams, Tidal Marsh Streams, and B valley types)**  
Consider for the Left Bank (LB) and the Right Bank (RB) of the streamside area.

- |                         |                         |  |
|-------------------------|-------------------------|--|
| LB                      | RB                      |  |
| <input type="radio"/> A | <input type="radio"/> A | Majority of streamside area with depressions able to pond water $\geq$ 6 inches deep |
| <input type="radio"/> B | <input type="radio"/> B | Majority of streamside area with depressions able to pond water 3 to 6 inches deep   |
| <input type="radio"/> C | <input type="radio"/> C | Majority of streamside area with depressions able to pond water < 3 inches deep      |

**15. Wetland Presence – streamside area metric (skip for Tidal Marsh Streams)**

Consider for the Left Bank (LB) and the Right Bank (RB). Do not consider wetlands outside of the streamside area or within the normal wetted perimeter of assessment reach.

- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| LB                                 | RB                                 |  |
| <input type="radio"/> Y            | <input type="radio"/> Y            | Are wetlands present in the streamside area? |
| <input checked="" type="radio"/> N | <input checked="" type="radio"/> N |  |

**16. Baseflow Contributors – assessment reach metric (skip for size 4 streams and Tidal Marsh Streams)**

Check all contributors within the assessment reach or within view of and draining to the assessment reach.

- A Streams and/or springs (jurisdictional discharges)
- B Ponds (include wet detention basins; do not include sediment basins or dry detention basins)
- C Obstruction that passes some flow during low-flow periods within assessment area (beaver dam, bottom-release dam)
- D Evidence of bank seepage or sweating (iron oxidizing bacteria in water indicates seepage)
- E Stream bed or bank soil reduced (dig through deposited sediment if present)
- F None of the above

**17. Baseflow Detractors – assessment area metric (skip for Tidal Marsh Streams)**

Check all that apply.

- A Evidence of substantial water withdrawals from the assessment reach (includes areas excavated for pump installation)
- B Obstruction not passing flow during low flow periods affecting the assessment reach (ex: watertight dam, sediment deposit)
- C Urban stream ( $\geq$  24% impervious surface for watershed)
- D Evidence that the stream-side area has been modified resulting in accelerated drainage into the assessment reach
- E Assessment reach relocated to valley edge
- F None of the above

**18. Shading – assessment reach metric (skip for Tidal Marsh Streams)**

Consider aspect. Consider "leaf-on" condition.

- A Stream shading is appropriate for stream category (may include gaps associated with natural processes)
- B Degraded (example: scattered trees)
- C Stream shading is gone or largely absent

**19. Buffer Width – streamside area metric (skip for Tidal Marsh Streams)**

Consider "vegetated buffer" and "wooded buffer" separately for left bank (LB) and right bank (RB) starting at the top of bank out to the first break.

- |                                    |                                    |                                    |                                    |   |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|---|
| Vegetated                          |                                    | Wooded                             |                                    |   |
| LB                                 | RB                                 | LB                                 | RB                                 |   |
| <input type="radio"/> A            | <input checked="" type="radio"/> A | <input type="radio"/> A            | <input type="radio"/> A            | $\geq$ 100-feet wide <u>or</u> extends to the edge of the watershed |
| <input type="radio"/> B            | <input type="radio"/> B            | <input type="radio"/> B            | <input type="radio"/> B            | From 50 to < 100-feet wide  |
| <input type="radio"/> C            | <input type="radio"/> C            | <input type="radio"/> C            | <input type="radio"/> C            | From 30 to < 50-feet wide   |
| <input checked="" type="radio"/> D | <input type="radio"/> D            | <input checked="" type="radio"/> D | <input type="radio"/> D            | From 10 to < 30-feet wide   |
| <input type="radio"/> E            | <input type="radio"/> E            | <input type="radio"/> E            | <input checked="" type="radio"/> E | < 10-feet wide <u>or</u> no trees                                   |

**20. Buffer Structure – streamside area metric (skip for Tidal Marsh Streams)**

Consider for left bank (LB) and right bank (RB) for Metric 19 ("Vegetated" Buffer Width).

- |                                    |                                    |   |
|------------------------------------|------------------------------------|---|
| LB                                 | RB                                 |   |
| <input type="radio"/> A            | <input type="radio"/> A            | Mature forest   |
| <input checked="" type="radio"/> B | <input checked="" type="radio"/> B | Non-mature woody vegetation <u>or</u> modified vegetation structure   |
| <input type="radio"/> C            | <input type="radio"/> C            | Herbaceous vegetation with or without a strip of trees < 10 feet wide |
| <input type="radio"/> D            | <input type="radio"/> D            | Maintained shrubs   |
| <input type="radio"/> E            | <input type="radio"/> E            | Little or no vegetation   |

**21. Buffer Stressors – streamside area metric (skip for Tidal Marsh Streams)**

Check all appropriate boxes for left bank (LB) and right bank (RB). Indicate if listed stressor abuts stream (Abuts), does not abut but is within 30 feet of stream (< 30 feet), or is between 30 to 50 feet of stream (30-50 feet).

If none of the following stressors occurs on either bank, check here and skip to Metric 22:

- |                         |                         |                                    |                         |                         |                         |  |
|-------------------------|-------------------------|------------------------------------|-------------------------|-------------------------|-------------------------|--|
| Abuts                   |                         | < 30 feet                          |                         | 30-50 feet              |                         |  |
| LB                      | RB                      | LB                                 | RB                      | LB                      | RB                      |  |
| <input type="radio"/> A | <input type="radio"/> A | <input type="radio"/> A            | <input type="radio"/> A | <input type="radio"/> A | <input type="radio"/> A | Row crops                                      |
| <input type="radio"/> B | <input type="radio"/> B | <input type="radio"/> B            | <input type="radio"/> B | <input type="radio"/> B | <input type="radio"/> B | Maintained turf                                |
| <input type="radio"/> C | <input type="radio"/> C | <input checked="" type="radio"/> C | <input type="radio"/> C | <input type="radio"/> C | <input type="radio"/> C | Pasture (no livestock)/commercial horticulture |
| <input type="radio"/> D | <input type="radio"/> D | <input type="radio"/> D            | <input type="radio"/> D | <input type="radio"/> D | <input type="radio"/> D | Pasture (active livestock use)                 |

**22. Stem Density – streamside area metric (skip for Tidal Marsh Streams)**

Consider for left bank (LB) and right bank (RB) for Metric 19 ("Wooded" Buffer Width).

- |                                    |                         |  |
|------------------------------------|-------------------------|--|
| LB                                 | RB                      |  |
| <input type="radio"/> A            | <input type="radio"/> A | Medium to high stem density  |
| <input checked="" type="radio"/> B | <input type="radio"/> B | Low stem density   |
| <input type="radio"/> C            | <input type="radio"/> C | No wooded riparian buffer <u>or</u> predominantly herbaceous species <u>or</u> bare ground |

**23. Continuity of Vegetated Buffer – streamside area metric (skip for Tidal Marsh Streams)**

Consider whether vegetated buffer is continuous along stream (parallel). Breaks are areas lacking vegetation > 10-feet wide.

LB RB

- A  A The total length of buffer breaks is < 25 percent.  
 B  B The total length of buffer breaks is between 25 and 50 percent.  
 C  C The total length of buffer breaks is > 50 percent.

**24. Vegetative Composition – First 100 feet of streamside area metric (skip for Tidal Marsh Streams)**

Evaluate the dominant vegetation within 100 feet of each bank or to the edge of the watershed (whichever comes first) as it contributes to assessment reach habitat.

LB RB

- A  A Vegetation is close to undisturbed in species present and their proportions. Lower strata composed of native species, with non-native invasive species absent or sparse.  
 B  B Vegetation indicates disturbance in terms of species diversity or proportions, but is still largely composed of native species. This may include communities of weedy native species that develop after clear-cutting or clearing or communities with non-native invasive species present, but not dominant, over a large portion of the expected strata or communities missing understory but retaining canopy trees.  
 C  C Vegetation is severely disturbed in terms of species diversity or proportions. Mature canopy is absent or communities with non-native invasive species dominant over a large portion of expected strata or communities composed of planted stands of non-characteristic species or communities inappropriately composed of a single species or no vegetation.

**25. Conductivity – assessment reach metric (skip for all Coastal Plain streams)**

25a.  Yes  No Was a conductivity measurement recorded?

If No, select one of the following reasons.  No Water  Other: \_\_\_\_\_

25b. Check the box corresponding to the conductivity measurement (units of microsiemens per centimeter).

- A <46  B 46 to < 67  C 67 to < 79  D 79 to < 230  E ≥ 230

Notes/Sketch:

\_\_\_\_\_



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

September 10, 2021

TO: Jeff Hemphill, Environmental Senior Specialist  
Environmental Coordination & Permitting Group, EAU

FROM: Melissa Miller, Environmental Program Consultant  
Biological Surveys Group, EAU

SUBJECT: Section 7 survey results for the northern long-eared bat (*Myotis septentrionalis*), and gray bat (*Myotis grisescens*) associated with the replacement of Bridge No. 84 over I-40 on SR 1234 in McDowell County, **TIP No. BR-0033**.

The North Carolina Department of Transportation (NCDOT, Division 13) proposes to replace Bridge No. 84 over I-40 on SR 1234 in McDowell County, TIP No. BR-0033. The existing bridge is a four span structure with steel beams, concrete deck, end walls and guard rails. The overall length of the structure is 233 feet.

Northern long-eared bat

The project to replace Bridge No. 84 has been reviewed for effects on the northern long-eared bat (NLEB). As of May 4, 2015, NLEB is listed by the U.S. Fish and Wildlife Service (USFWS) as "Threatened" under the Endangered Species Act of 1973. As of September 10, 2021, NLEB is listed in IPaC (<https://ecos.fws.gov/ipac/>) as occurring in McDowell County.

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated July 2021, **the nearest NLEB hibernacula record is 15 miles southwest of the project and no known NLEB roost trees occur within 150 feet of the project area.**

NCDOT has also reviewed the USFWS Asheville Field office website ([http://www.fws.gov/asheville/htmls/project\\_review/NLEB\\_in\\_WNC.html](http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html)) for consistency with NHP records. This project is located entirely outside of the red highlighted areas (12-digit HUC) that the USFWS Asheville Field Office has determined to be representative of an area that may require consultation. The closest 12 digit (030501010202) red HUC is approximately 10 miles away (North Fork Catawba River).

On June 9, 2021, NV5 biologists assessed bridge No. 84 for potential northern long-eared bat habitat. Suitable roosting crevices and deck drains were present on the structure. No evidence (bats, staining, and guano) of bats was observed. Bridge No. 84 was previously surveyed in 2018 by NCDOT biologists. No evidence of bats in any form (bats, guano, staining) was observed during that survey. Snags and shaggy barked trees greater than 3" dbh are present within the project area. Based on the presence of suitable roost trees, NCDOT recommends a Biological Conclusion of **May Affect Not Likely To Adversely Affect** for the northern long-eared bat. In order to minimize impacts to potential roosting habitat, a tree clearing moratorium may be required between April 1 and October 15 of any year.

#### Gray bat

The project to replace Bridge No. 84 has also been reviewed for effects on the gray bat (MYGR). As of April 28, 1976, the gray bat was listed by the U.S. Fish and Wildlife Service (USFWS) as "Endangered" under the Endangered Species Act of 1973. As of September 10, 2021, MYGR is listed in IPaC (<https://ecos.fws.gov/ipac/>) as occurring in McDowell County.

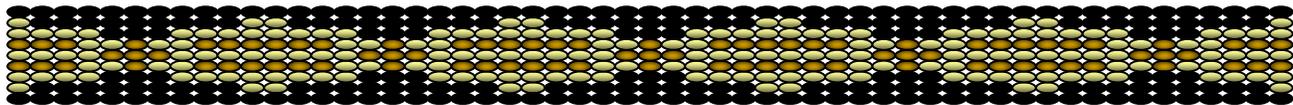
According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated in July 2021, MYGR have been documented in McDowell County. USFWS, North Carolina Wildlife Resources Commission (WRC) and NHP data indicate that **the closest known occurrence of MYGR is approximately 7 miles northeast of the project site.**

On June 9, 2021, NV5 biologists assessed bridge No. 84 for potential gray bat habitat. Suitable roosting crevices and deck drains were present on the structure. No evidence of bats (bats, staining, or guano) was observed. Bridge No. 84 was previously surveyed in 2018 by NCDOT biologists. No evidence of bats in any form (bats, guano, staining) was observed during that survey. No caves or mines are located within the project footprint or within line of sight of the bridge. Based on the bridge type, and the lack of caves or mines in the project vicinity, NCDOT recommends a Biological Conclusion of **MAY AFFECT NOT LIKELY TO ADVERSELY AFFECT** for gray bats.

If you need any additional information, please contact Melissa Miller at 919-707-6127.

Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, South Carolina 29730

Office 803-328-2427  
Fax 803-328-5791



August 17, 2021

Attention: Philip S. Harris III  
NC Department of Transportation  
1598 Mail Service Center  
Raleigh, NC 27699

Re. THPO #	TCNS #	Project Description
2021-193-136		Replacement of Bridge No. 84 on Parker Padgett Road over I-40 in McDowell Co. as project BR-0033

Dear Mr. Harris,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail [Caitlin.Rogers@catawba.com](mailto:Caitlin.Rogers@catawba.com).

Sincerely,

Wenonah G. Haire  
Tribal Historic Preservation Officer

## Re: NCDOT Project BR-0033 Project Notification and Comment Request

LeeAnne Wendt <LWendt@muscogeenation.com>

Wed 8/25/2021 6:09 PM

To: Turchy, Michael A <maturchy@ncdot.gov>

Mr. Turchy,

Thank you for contacting the Muscogee (Creek) Nation concerning NCDOT Project BR-0033 regarding the Replacement of Bridge No. 84 on Parker Padgett Road (SR 1234) over I-40 in McDowell County, North Carolina. The project area is located within the Muscogee (Creek) Nation's historic area of interest and is of importance to our Tribe. After careful review of the material provided, **the Muscogee (Creek) Nation believes that there should be no effects to any known historic properties for the proposed project.** However, due to the historic presence of Muscogee people in the project area, there is always the possibility of inadvertent discoveries of cultural resources, human remains and related NAGPRA items, etc. Even if the proposed project is occurring in areas of existing or prior development, there is still a possibility. With that being stated, if this does occur during ground disturbing activities, the Muscogee (Creek) Nation requests that all work in the area ceases and that our office as well as other appropriate agencies be notified immediately. Additionally, if any changes take place for the project, we require that the information is sent to us for further review. If you have any questions regarding this, please do not hesitate to ask me.

Regards,

LeeAnne Wendt

**LeeAnne Wendt, M.A., RPA**

Tribal Archaeologist, Historic and Cultural Preservation Department

The Muscogee Nation

P.O. Box 580 | Okmulgee, OK 74447

T 918.732.7852

F 918.758.0649

[lwendt@MuscogeeNation.com](mailto:lwendt@MuscogeeNation.com)

[MuscogeeNation.com](http://MuscogeeNation.com)



THE MUSCOGEE NATION

## BR-0033 Tribal Coordination Letter Distribution

Beckwith, Loretta A CIV USARMY CESAW (USA) <Loretta.A.Beckwith@usace.army.mil>

Wed 7/14/2021 1:58 PM

**To:** Turchy, Michael A <maturchy@ncdot.gov>; Hemphill, Jeffrey L <jhemphill@ncdot.gov>

**Cc:** smupeq <smupeq@ncdot.gov>; Wilkerson, Matt T <mtwilkerson@ncdot.gov>

Great – thanks for catching and addressing this!

Lori

---

**From:** Turchy, Michael A <maturchy@ncdot.gov>

**Sent:** Wednesday, July 14, 2021 12:59 PM

**To:** Beckwith, Loretta A CIV USARMY CESAW (USA) <Loretta.A.Beckwith@usace.army.mil>; Wilkerson, Matt T <mtwilkerson@ncdot.gov>

**Cc:** Hemphill, Jeffrey L <jhemphill@ncdot.gov>; smupeq <smupeq@ncdot.gov>

**Subject:** [Non-DoD Source] BR-0033 Tribal Coordination Letter Distribution

Lori and Matt-

As we were working on the permit application for this project, we noted that only the EBCI were notified during project planning.

The list for McDowell County now includes the Catawba Nation, Cherokee Nation, Muscogee (Creek) Nation, and the United Keetoowah Band of Cherokee Indians.

Therefore, we went ahead and distributed a Tribal Coordination Letter to those tribes, which was distributed today.

Attached is the evidence of distribution. We'll forward responses when received.

Thanks,

Michael



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 1536 TOM STEVEN RD  
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Ship Date: 07/14/2021	
Expected Delivery Date: 07/17/2021	

**From:** MICHAEL TURCHY  
 NCDOT  
 1000 BIRCH RIDGE DR  
 RALEIGH NC 27610-4328

**To:** WENONAH HAIRE  
 CATAWBA INDIAN NATION-TRIBAL HISTORIC PRESERVATION  
 1536 TOM STEVEN RD  
 ROCK HILL SC 29730-9535

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

July 14, 2021

Dr. Wenonah Haire  
Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, SC 29730

Dear Dr. Haire,

The North Carolina Department of Transportation is developing the engineering studies for the replacement of Bridge No. 84 on Parker Padgett Road (SR 1234) over I-40 in McDowell County as project BR-0033. The US Army Corps of Engineers (USACE) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map and archaeological survey report is attached.

The coordinates of this project are approximately 35.638899, -82.1449572.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by August 20th so that your comments can be used in the evaluation of this project. If you have any questions concerning this project, or would like any additional information, please contact me at [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov) or (919) 707-6157.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael L. Harris III".

Handwritten initials "PHS" in black ink.  
Philip S. Harris III, P.E., C.P.M.  
Environmental Analysis Unit Head

ec:

Matt Wilkerson, NCDOT Archaeology Team Leader  
Lori Beckwith USACE Project Manager

[External] BR-0033

Caitlin Rogers <caitlin.rogers@catawba.com>

Tue 8/17/2021 11:52 AM

To: Turchy, Michael A <maturchy@ncdot.gov>

 1 attachments (53 KB)

2021-193-136.docx;

**CAUTION:** External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Mr. Harris,

Attached is the concurrence letter for your project. Thanks

Caitlin

Caitlin Rogers  
Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, SC 29730

803-328-2427 ext. 226

\*\*\* Please note that my email has changed to Caitlin.Rogers@catawba.com \*\*\*

**\*Please Note: We CANNOT accept Section 106 forms via e-mail, unless requested. Please send us hard copies. Thank you for your understanding\***

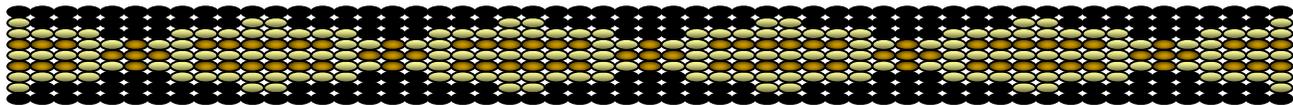
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Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, South Carolina 29730

Office 803-328-2427  
Fax 803-328-5791



August 17, 2021

Attention: Philip S. Harris III  
NC Department of Transportation  
1598 Mail Service Center  
Raleigh, NC 27699

Re. THPO #	TCNS #	Project Description
2021-193-136		Replacement of Bridge No. 84 on Parker Padgett Road over I-40 in McDowell Co. as project BR-0033

Dear Mr. Harris,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail [Caitlin.Rogers@catawba.com](mailto:Caitlin.Rogers@catawba.com).

Sincerely,

Wenonah G. Haire  
Tribal Historic Preservation Officer

## NCDOT Project BR-0033 Project Notification and Comment Request

Turchy, Michael A <maturchy@ncdot.gov>

Wed 7/14/2021 12:41 PM

To: elizabeth-toombs@cherokee.org <elizabeth-toombs@cherokee.org>

 1 attachments (5 MB)

BR-0033.pdf;

Ms. Toombs,

Please find attached Project Notification and Comment Request for a bridge replacement project by NCDOT

Thank you for your time to review and comment on the information.

-Michael

**Michael Turchy**

Environmental Coordination and Permitting  
North Carolina Department of Transportation

[919 789-1102](tel:9197891102) mobile

[919 707-6157](tel:9197076157) office

1598 Mail Service Center  
Raleigh, NC 27699-1598

1000 Birch Ridge Drive  
Raleigh, NC 27610

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

July 14, 2021

Elizabeth Toombs  
Tribal Historic Preservation Officer  
PO BOX 948  
Tahlequah OK, 74465

Dear Ms. Toombs,

The North Carolina Department of Transportation is developing the engineering studies for the replacement of Bridge No. 84 on Parker Padgett Road (SR 1234) over I-40 in McDowell County as project BR-0033. The US Army Corps of Engineers (USACE) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map and archaeological survey report is attached.

The coordinates of this project are approximately 35.638899, -82.1449572.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by August 20th so that your comments can be used in the evaluation of this project. If you have any questions concerning this project, or would like any additional information, please contact me at [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov) or (919) 707-6157.

Sincerely,

A handwritten signature in black ink that reads "Michael" followed by a stylized surname.

*for*  
Philip S. Harris III, P.E., C.P.M.  
Environmental Analysis Unit Head

ec:

Matt Wilkerson, NCDOT Archaeology Team Leader  
Lori Beckwith USACE Project Manager

## NCDOT Project BR-0033 Project Notification and Comment Request

Turchy, Michael A <maturchy@ncdot.gov>

Wed 7/14/2021 12:44 PM

To: lwendt@mcn-nsn.gov <lwendt@mcn-nsn.gov>

 1 attachments (5 MB)

BR-0033.pdf;

Ms. Wendt,

Please find attached Project Notification and Comment Request for a bridge replacement project by NCDOT.

Thank you for your time to review and comment on the information.

-Michael

**Michael Turchy**

Environmental Coordination and Permitting  
North Carolina Department of Transportation

[919 789-1102](tel:9197891102) mobile

[919 707-6157](tel:9197076157) office

1598 Mail Service Center  
Raleigh, NC 27699-1598

1000 Birch Ridge Drive  
Raleigh, NC 27610

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

July 14, 2021

LeeAnne Wendt  
PO BOX 580  
Okmulgee, OK 74447

Dear Ms. Wendt,

The North Carolina Department of Transportation is developing the engineering studies for the replacement of Bridge No. 84 on Parker Padgett Road (SR 1234) over I-40 in McDowell County as project BR-0033. The US Army Corps of Engineers (USACE) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map and archaeological survey report is attached.

The coordinates of this project are approximately 35.638899, -82.1449572.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by August 20th so that your comments can be used in the evaluation of this project. If you have any questions concerning this project, or would like any additional information, please contact me at [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov) or (919) 707-6157.

Sincerely,

A handwritten signature in black ink that reads "Michael" followed by a stylized flourish.

*for*  
Philip S. Harris III, P.E., C.P.M.  
Environmental Analysis Unit Head

ec:

Matt Wilkerson, NCDOT Archaeology Team Leader  
Lori Beckwith USACE Project Manager

## Re: NCDOT Project BR-0033 Project Notification and Comment Request

LeeAnne Wendt <LWendt@muscogeenation.com>

Wed 8/25/2021 6:09 PM

To: Turchy, Michael A <maturchy@ncdot.gov>

Mr. Turchy,

Thank you for contacting the Muscogee (Creek) Nation concerning NCDOT Project BR-0033 regarding the Replacement of Bridge No. 84 on Parker Padgett Road (SR 1234) over I-40 in McDowell County, North Carolina. The project area is located within the Muscogee (Creek) Nation's historic area of interest and is of importance to our Tribe. After careful review of the material provided, **the Muscogee (Creek) Nation believes that there should be no effects to any known historic properties for the proposed project.** However, due to the historic presence of Muscogee people in the project area, there is always the possibility of inadvertent discoveries of cultural resources, human remains and related NAGPRA items, etc. Even if the proposed project is occurring in areas of existing or prior development, there is still a possibility. With that being stated, if this does occur during ground disturbing activities, the Muscogee (Creek) Nation requests that all work in the area ceases and that our office as well as other appropriate agencies be notified immediately. Additionally, if any changes take place for the project, we require that the information is sent to us for further review. If you have any questions regarding this, please do not hesitate to ask me.

Regards,

LeeAnne Wendt

**LeeAnne Wendt, M.A., RPA**

Tribal Archaeologist, Historic and Cultural Preservation Department

The Muscogee Nation

P.O. Box 580 | Okmulgee, OK 74447

T 918.732.7852

F 918.758.0649

[lwendt@MuscogeeNation.com](mailto:lwendt@MuscogeeNation.com)

[MuscogeeNation.com](http://MuscogeeNation.com)



THE MUSCOGEE NATION

## NCDOT Project BR-0033 Project Notification and Comment Request

Turchy, Michael A <maturchy@ncdot.gov>

Wed 7/14/2021 12:46 PM

To: ukbthpo@ukb-nsn.gov <ukbthpo@ukb-nsn.gov>

 1 attachments (5 MB)

BR-0033.pdf;

Ms. Warrior,

Please find attached Project Notification and Comment Request for a bridge replacement project by NCDOT.

Thank you for your time to review and comment on the information.

-Michael

**Michael Turchy**

Environmental Coordination and Permitting  
North Carolina Department of Transportation

[919 789-1102](tel:9197891102) mobile

[919 707-6157](tel:9197076157) office

1598 Mail Service Center  
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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

July 14, 2021

Whitney Warrior  
Tribal Historic Preservation Office  
PO BOX 1245  
Tahlequah OK, 74465

Dear Ms. Warrior,

The North Carolina Department of Transportation is developing the engineering studies for the replacement of Bridge No. 84 on Parker Padgett Road (SR 1234) over I-40 in McDowell County as project BR-0033. The US Army Corps of Engineers (USACE) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map and archaeological survey report is attached.

The coordinates of this project are approximately 35.638899, -82.1449572.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by August 20th so that your comments can be used in the evaluation of this project. If you have any questions concerning this project, or would like any additional information, please contact me at [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov) or (919) 707-6157.

Sincerely,

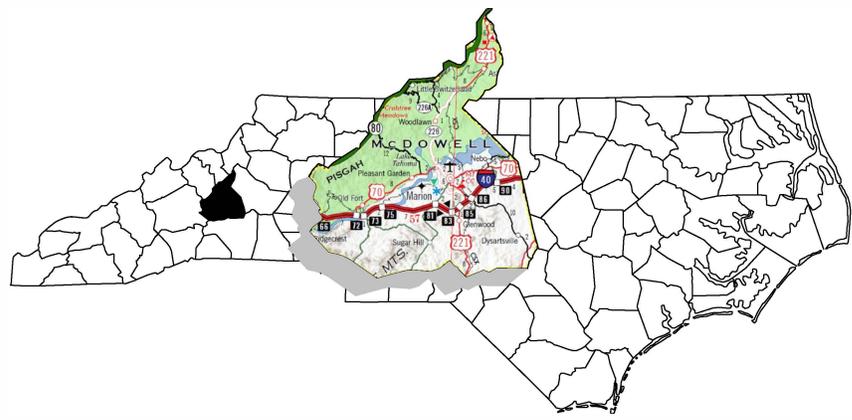
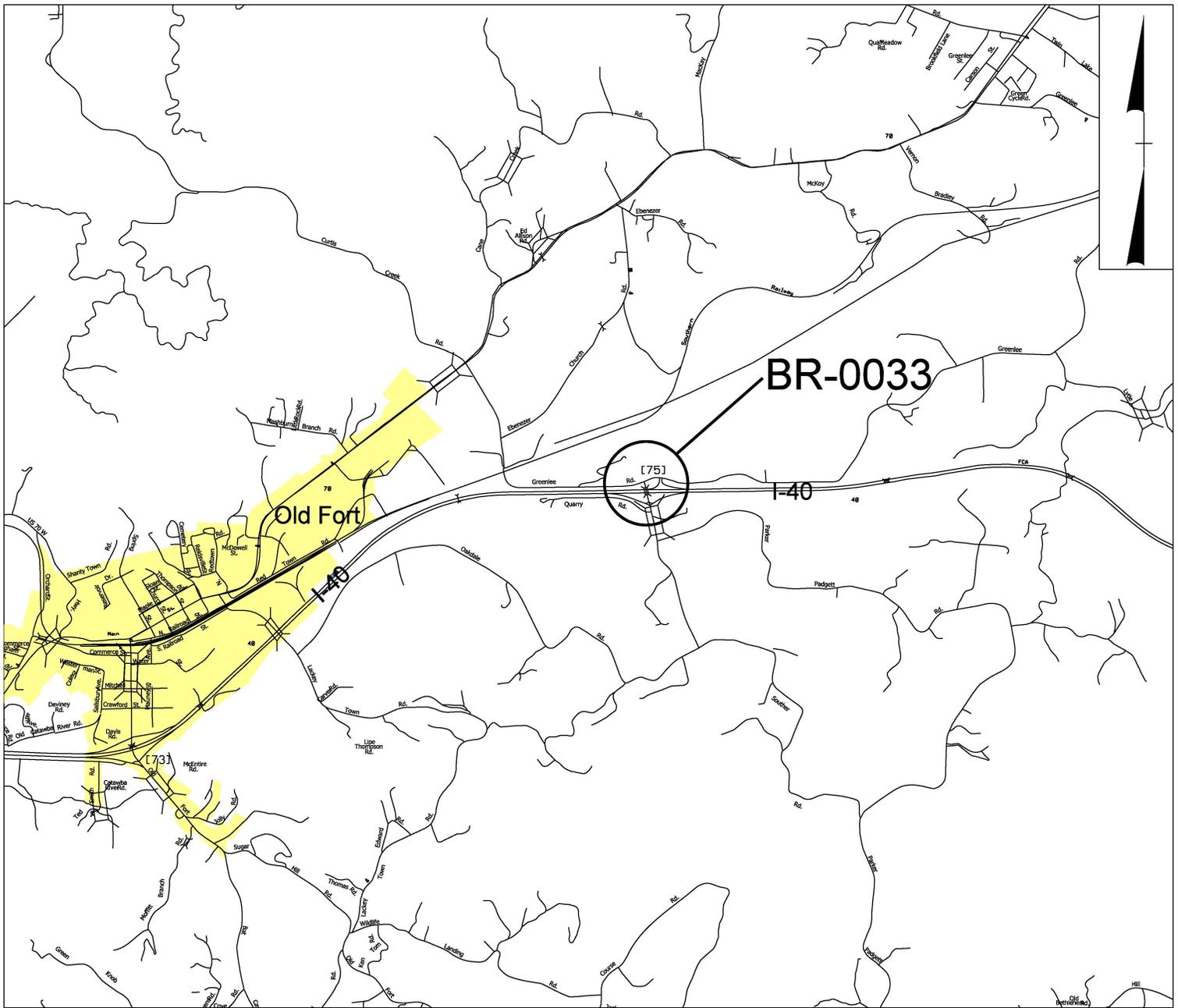
A handwritten signature in black ink that reads "Michael Luby".

A handwritten signature in black ink that reads "Philip S. Harris III".

Philip S. Harris III, P.E., C.P.M.  
Environmental Analysis Unit Head

ec:

Matt Wilkerson, NCDOT Archaeology Team Leader  
Lori Beckwith USACE Project Manager



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MCDOWELL COUNTY REPLACE  
 BRIDGE NO. 580084 ON  
 SR 123 (PARKER PADGETT RD)  
 OVER I-40  
 STIP # BR-0033  
 WBS Element No. 67033.1.1



**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.

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**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**

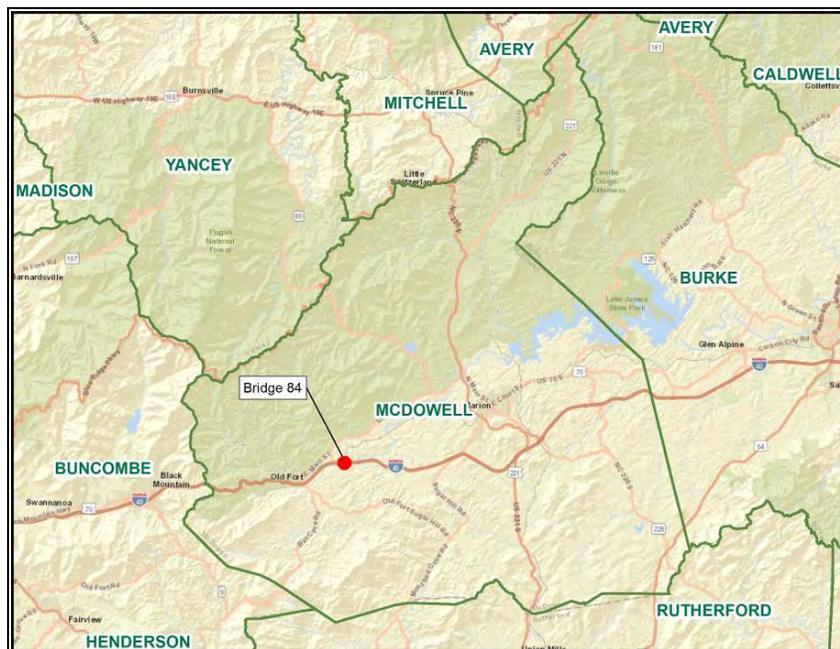
*Programmatic Agreement # 17-12-0047*

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

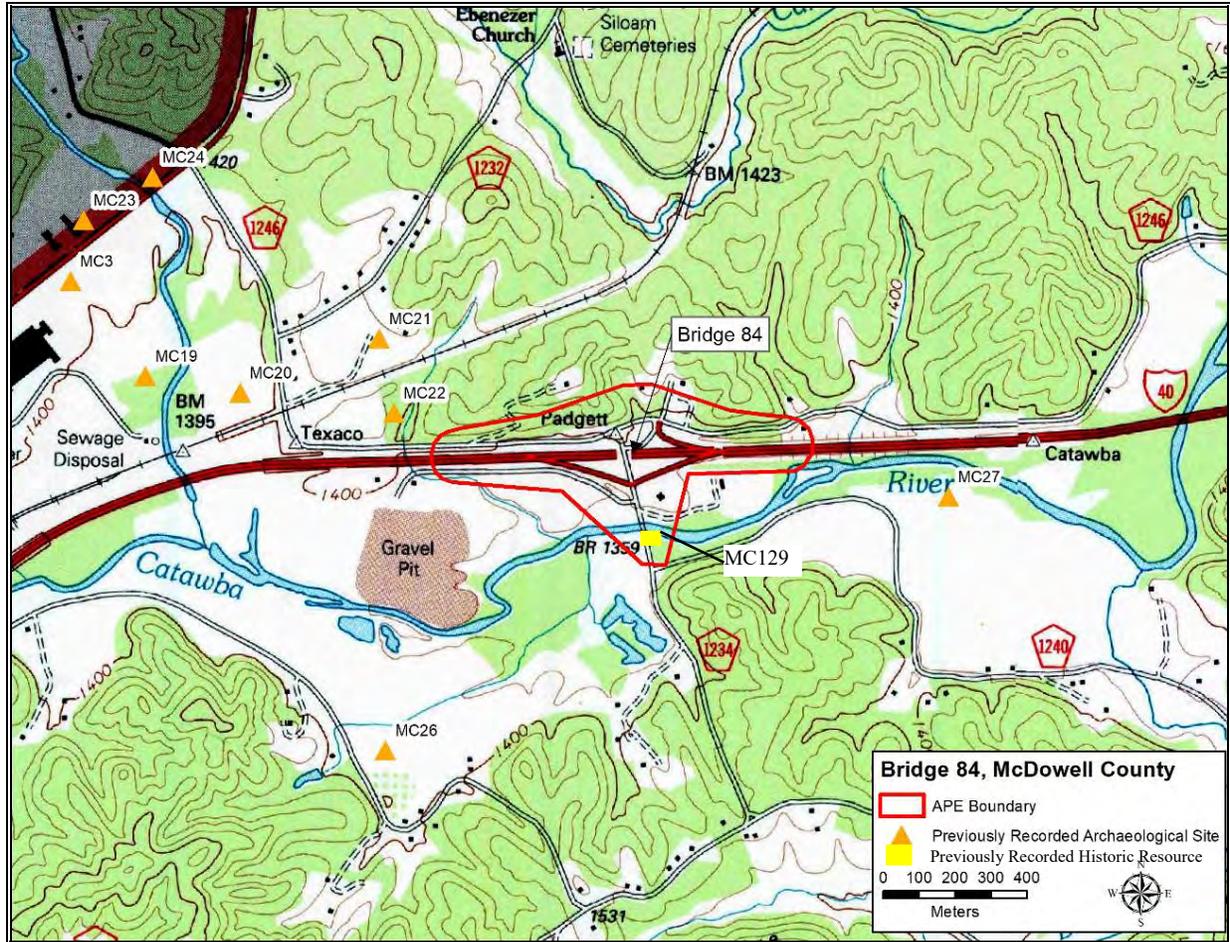
**Introduction**

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 archaeological 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

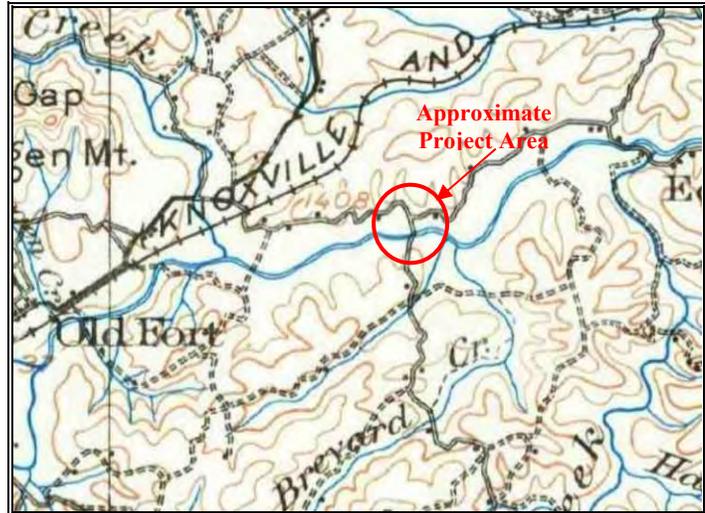
Background research consisted of an examination of topographic and historic maps and the listings of previously recorded sites, previous archaeological surveys, and previous environmental reviews at the Office of State Archaeology (OSA) in Raleigh.

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

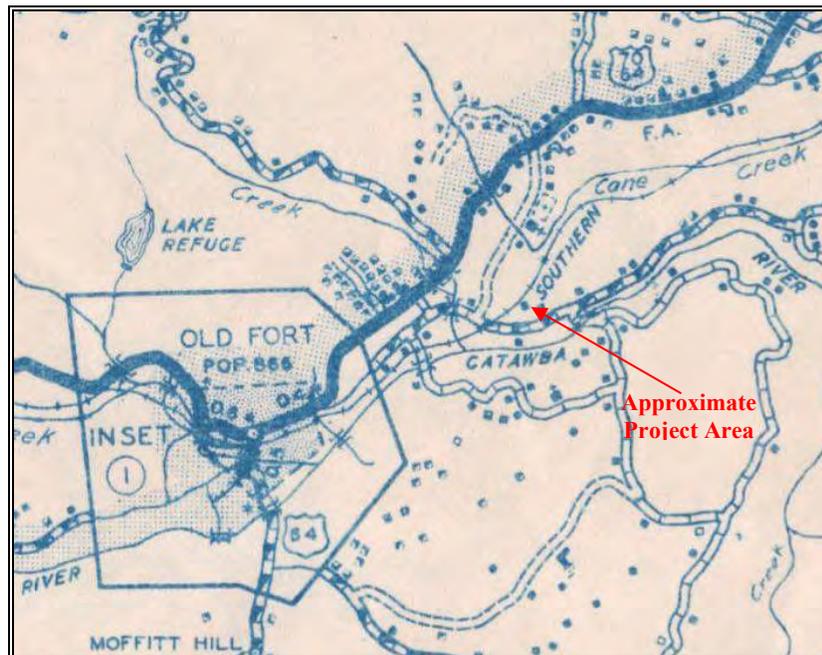
1982 (USGS 1900, 1957, 1962, 1982). One of the largest impacts to the area was the construction of Interstate 40 in the 1960s (NCRoads 2018). Prior to this time Bridge No. 84 and several of the roads in the area had not been constructed.

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.

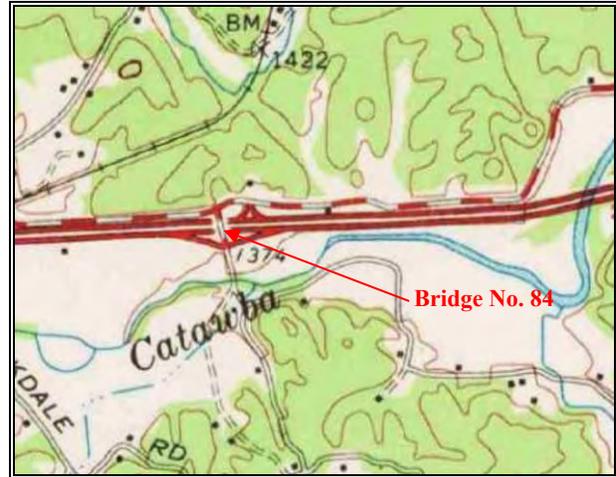


**Figure 3.** 1900 topographic map showing the project vicinity (1900 USGS *Mount Mitchell, NC* 1:125,000 scale topographic map).



**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 within 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 Carter, 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 landowner 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	Description	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 metamorphic 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.



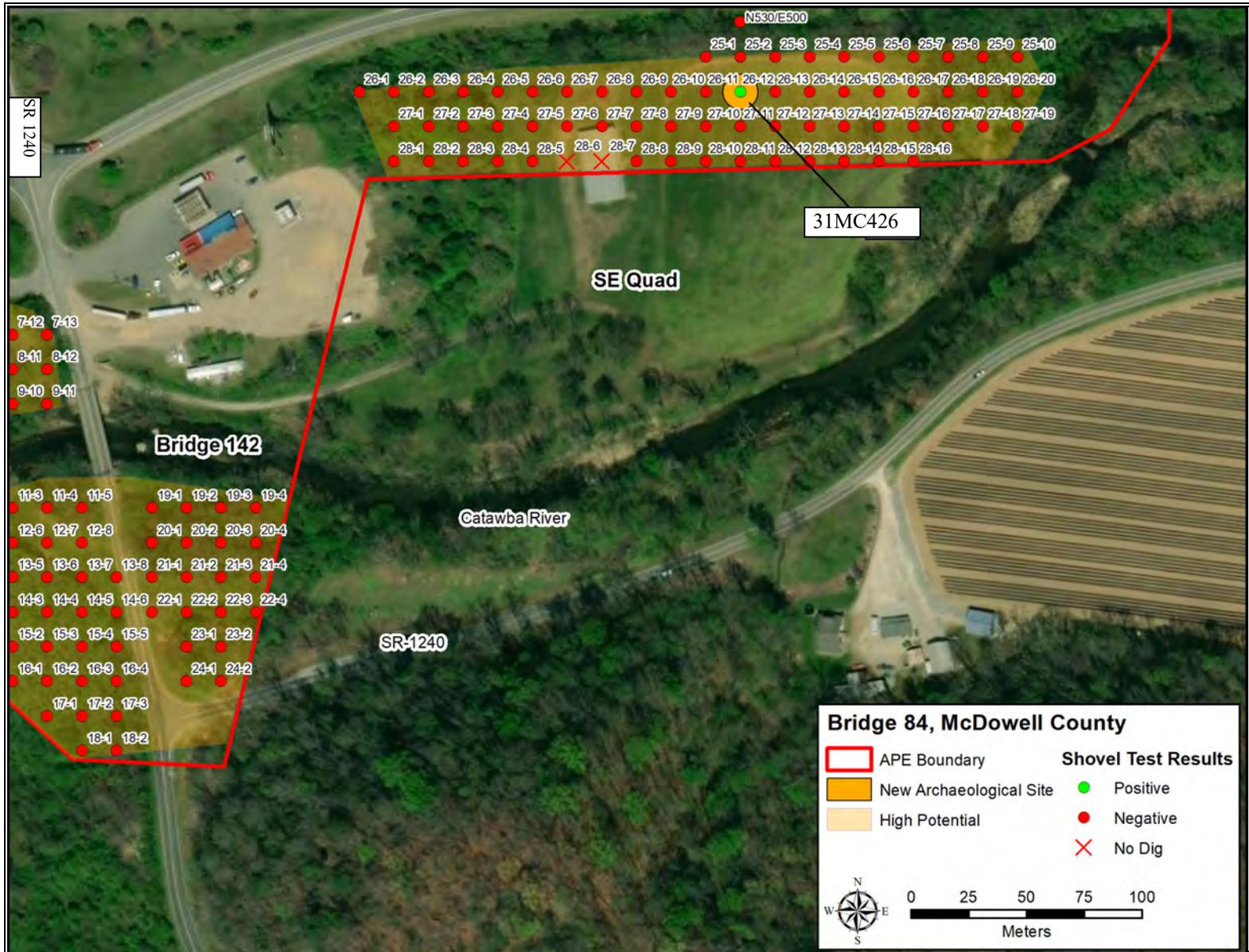


Figure 7. Aerial image of the southeast quadrant showing the locations of shovel tests and site 31MC426.

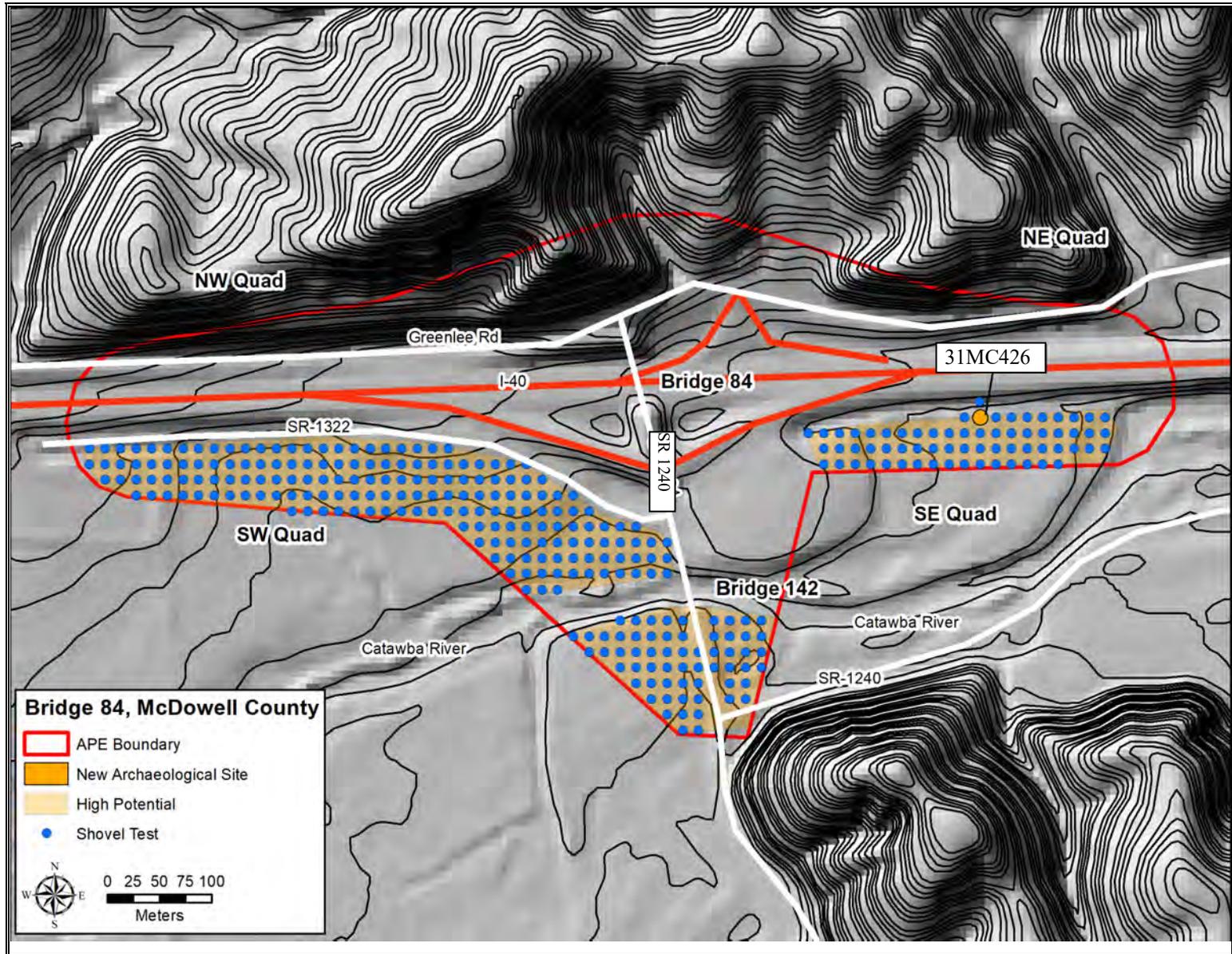
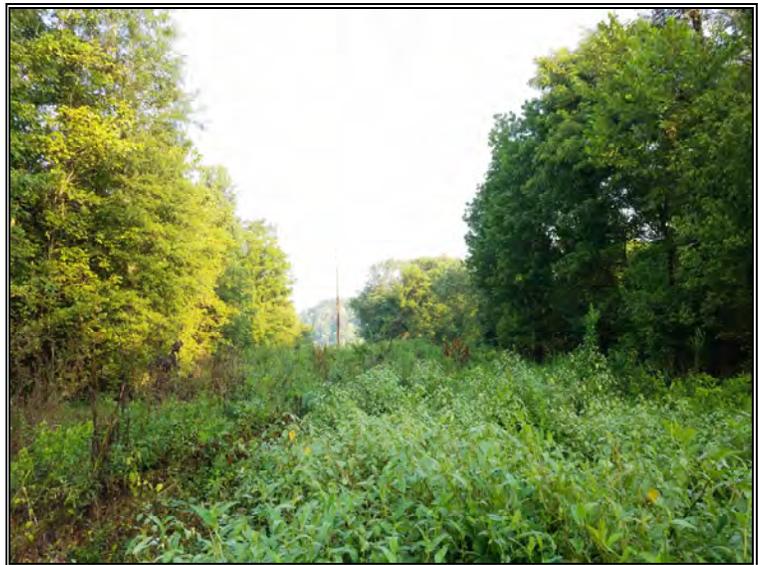


Figure 8. LiDAR map of the Bridge No. 84 APE showing shovel test locations and site 31MC426 (Jones 2010).

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 test 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.

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.



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

*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.

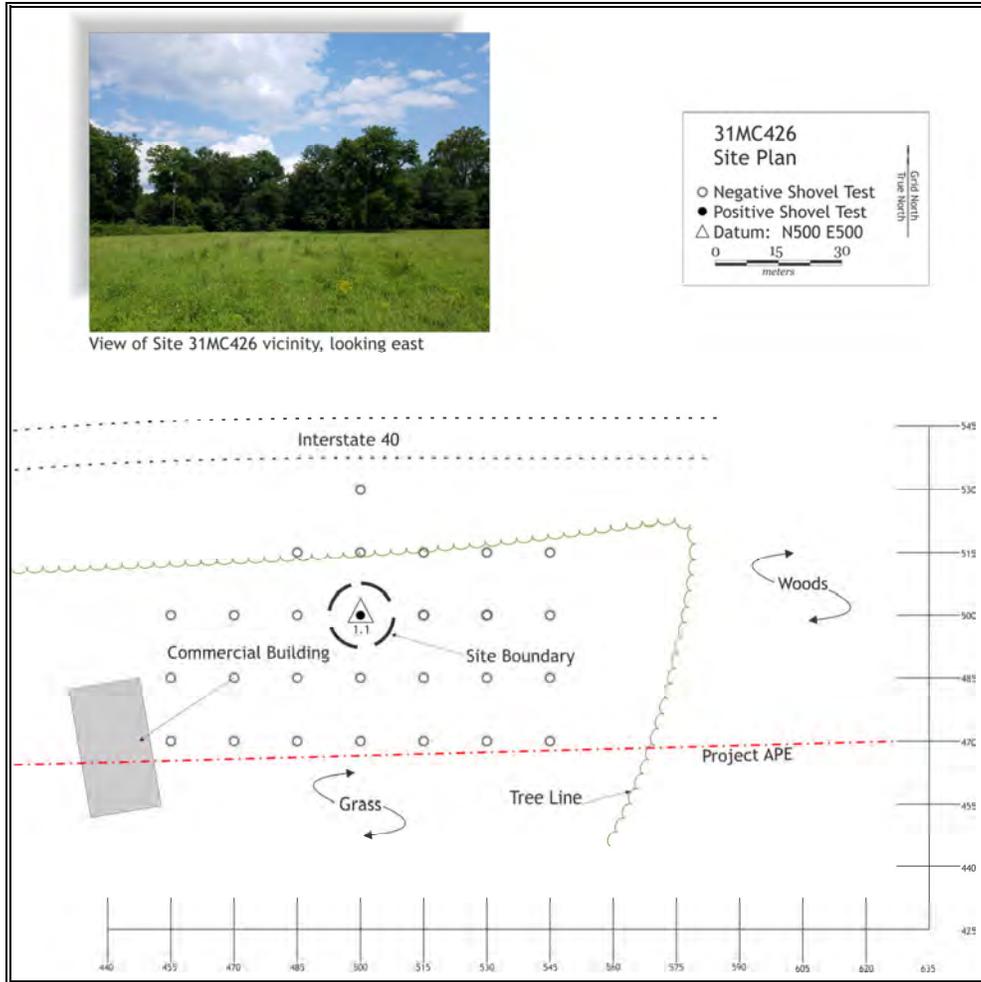


Figure 22. Plan map of site 31MC426



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

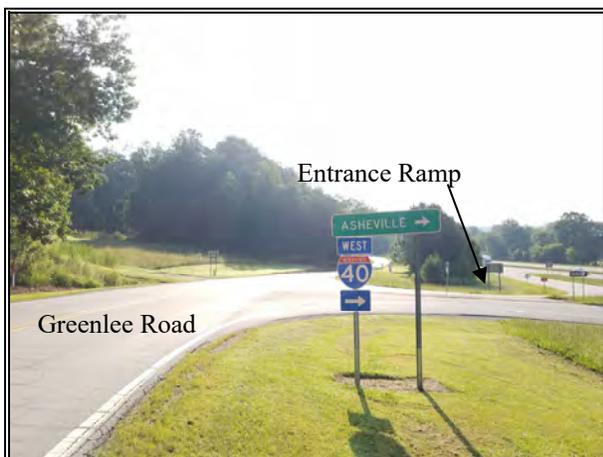


**Figure 24.** View of northwest quadrant, looking east toward intersection with SR 1240.

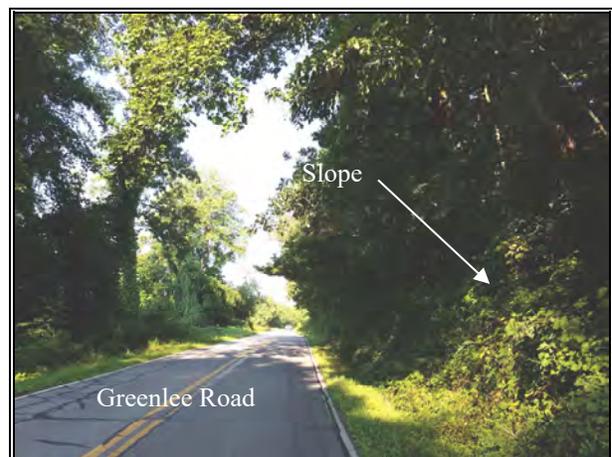


**Figure 25.** View of northwest quadrant showing gravel driveway, looking east toward Bridge No. 84.

*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

















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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)	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)	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

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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	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	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

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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

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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

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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

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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)	<i>Very dark grayish brown (10YR3/2) sandy loam</i>	60-70 cm (23.6-27.6 in)	<i>Dark yellowish brown (10YR4/4) sandy loam</i>	<i>Grassy floodplain terrace; two ceramic sherds 0-30 cm (0-11.8 in)</i>
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



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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

<b>Site</b>	31MC426		<b>Accession Number:</b>	2018.0574	
<b>Provenience Number:</b>	1.1	Bridge No. 84, N500 E500, 0-30 cm			
<b>Catalog Number</b>	<b>Specimen Number</b>	<b>Quantity</b>	<b>Weight (g)</b>	<b>Description</b>	<b>Comments</b>
1	p1	1	3.6	Medium Sand Temper Pisgah Complicated Stamped Body Sherd	
2	p2	1	1	Residual Sherd	MST, eroded plain, UID type





The McDowell County soil survey shows the soils in the A.P.E. are Evard-Cowee complex (25-60 % slopes) and Hayesville-Evard complex (15-25% slopes) along the north side of I-40, and Braddock clay loam (2-6% slopes), eroded, Dillard loam (1-4% slopes), rarely-flooded, and Rosman loam (0-3% slopes), occasionally-flooded, in the floodplain along the south side of I-40. The soil in the A.P.E. on the south side of the Catawba River is Udifluent, sandy, frequently-flooded, and Biltmore loamy fine sand (0-3% slopes), occasionally-flooded.

The aerial photograph shows the A.P.E. in the northwest and northeast quadrants are occupied mostly by the frontage road (SR 1246 [Greenlee Rd.]) that runs along the north side of I-40. The A.P.E. in the southwest quadrant is cleared (pasture?) in the north half, and wooded to the south of the Catawba River. The A.P.E. in the southeast quadrant includes a developed parcel (commercial?) along the south side of the I-40 entrance ramp, cleared land (pasture) along the south side of I-40, and wooded land to the south of the Catawba River.

A review of information at the O.S.A. shows there are no previously recorded sites near the A.P.E. The A.P.E. is not within any areas that have been previously surveyed for archaeological sites. The A.P.E. is not within any projects that have been reviewed by the State Historic Preservation Office (HPO).

The reconnaissance of the project area was conducted by NCDOT archaeologist Caleb Smith on 3/8/2018. The reconnaissance identified several parts of the A.P.E. that have a moderate to high potential for archaeological sites.

The landform on the south side of Bridge 142 on SR 1240 over the Catawba River is level floodplain. The land to the east of the road appears to be poorly-drained. The land to the west of the road may be well-drained.

The landform on the north side of Bridge 142 and the east side of SR 1240 (also the southeast quadrant of bridge 84 over I-40) is level floodplain. The A.P.E. is disturbed by a gravel driveway running along the north side of the river, and a parking lot behind a Stuckey's/Dairy Queen. The entrance ramp to I-40 is located along the south side of I-40 in this quadrant. The floodplain at the east end of the A.P.E. appears to be undisturbed and has a moderate to high potential for archaeological sites. (We did not access this part of the A.P.E.)

The land on the west side of SR 1240 (also the southwest quadrant of Bridge 84 over I-40) is level floodplain. The floodplain is currently used as pasture, and appears to be undisturbed. This floodplain has a moderate to high potential for archaeological sites. There is a small stream near the west end of the quadrant. A frontage road (SR 1322) and the exit ramp from I-40 run along the south side of I-40. There is a small stream located near the west end of the A.P.E. in this quadrant.

The A.P.E. on the north side of the I-40 bridge is occupied by SR 1246. The entrance ramp to and the exit ramp from I-40 are both located in the northeast quadrant. The landform in the northwest and northeast quadrants is a sloped hillside, a landform with a low potential for archaeological sites. There are two small structures that appear to be older than 50 years of age in the northeast quadrant.

Recommend survey of the level, well-drained landforms in the southwest and southeast

quadrants of the A.P.E.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
 Photocopy of County Survey Notes    Other:

**FINDING BY NCDOT ARCHAEOLOGIST – SURVEY REQUIRED**

Caleb Smith

5/3/2018

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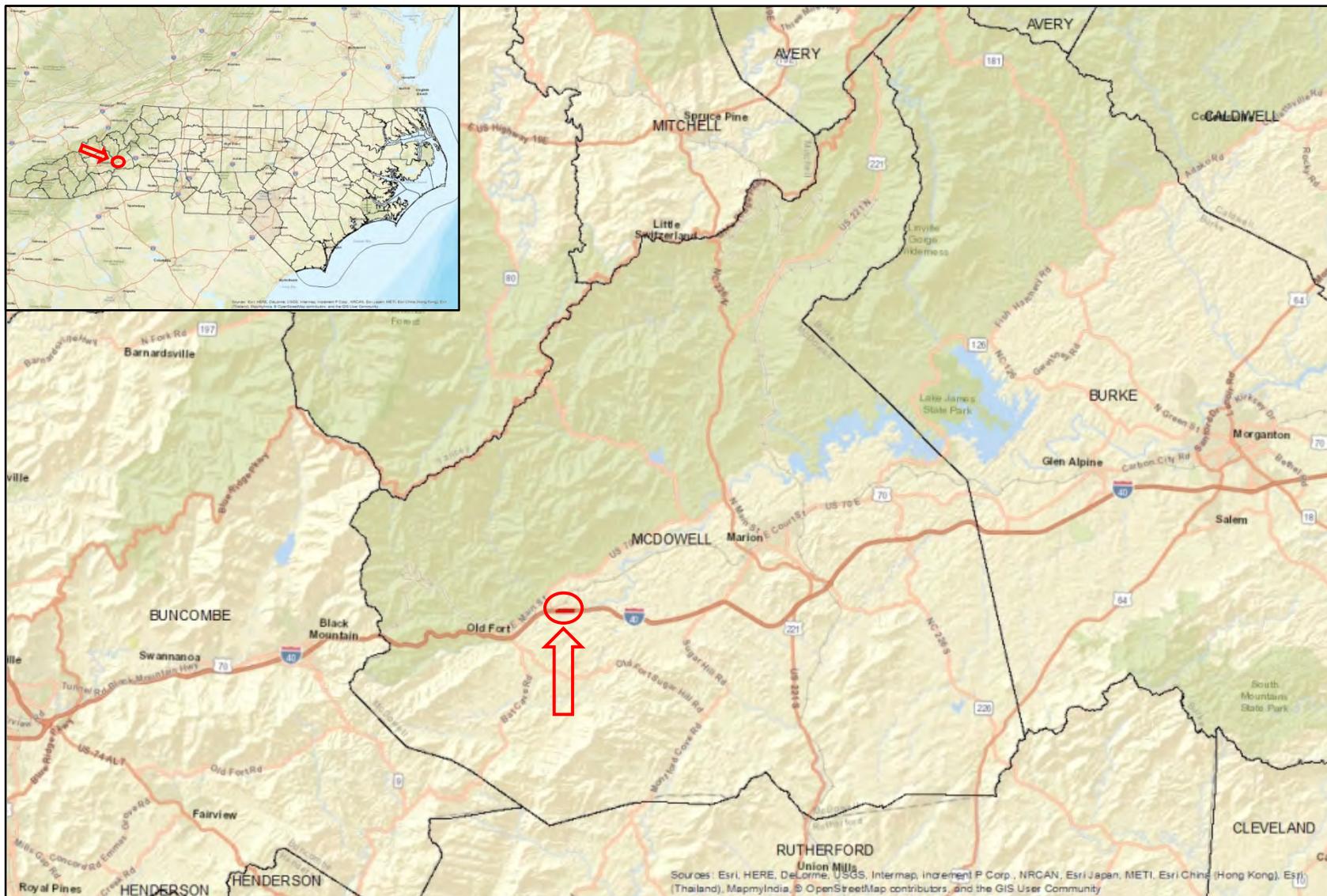
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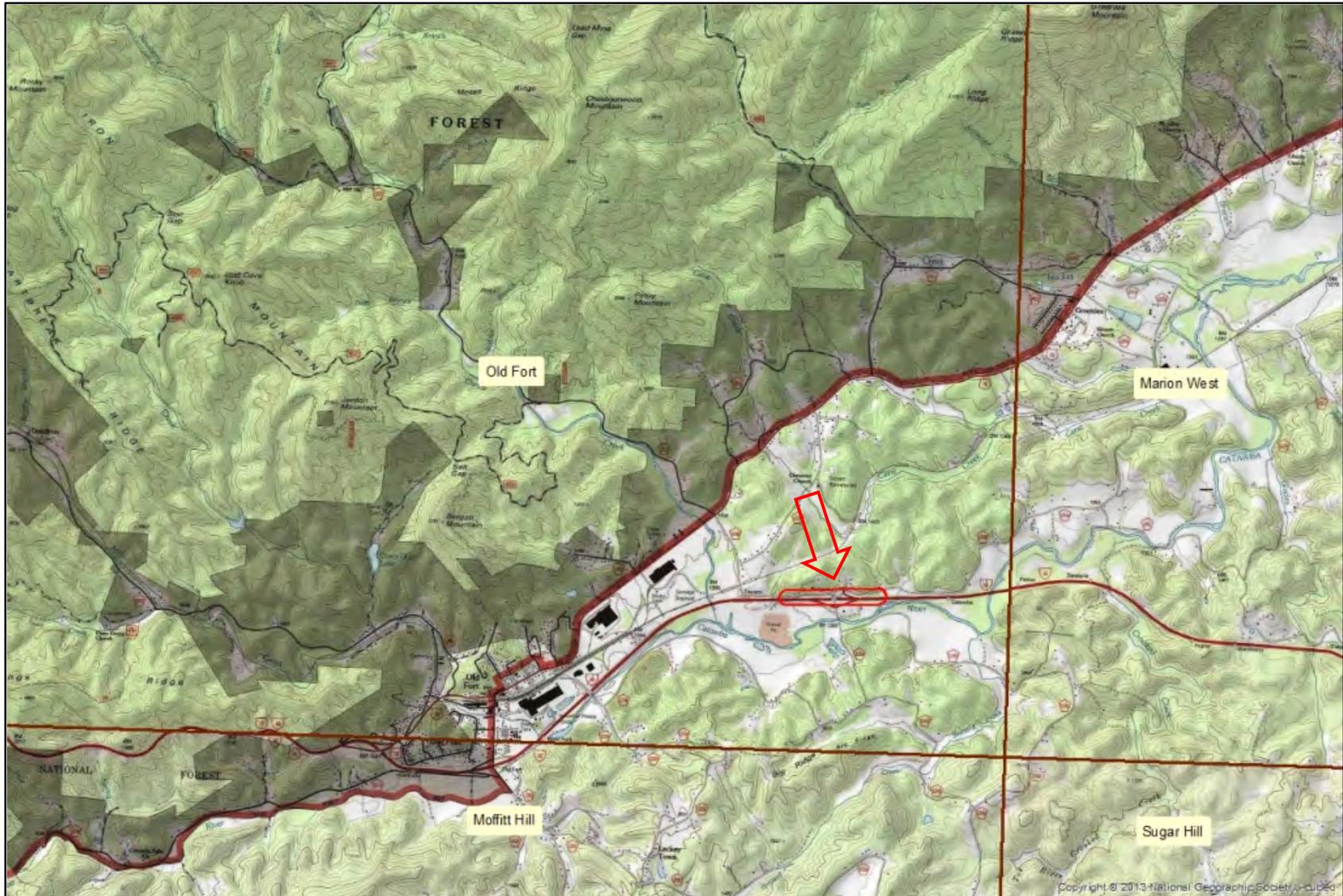
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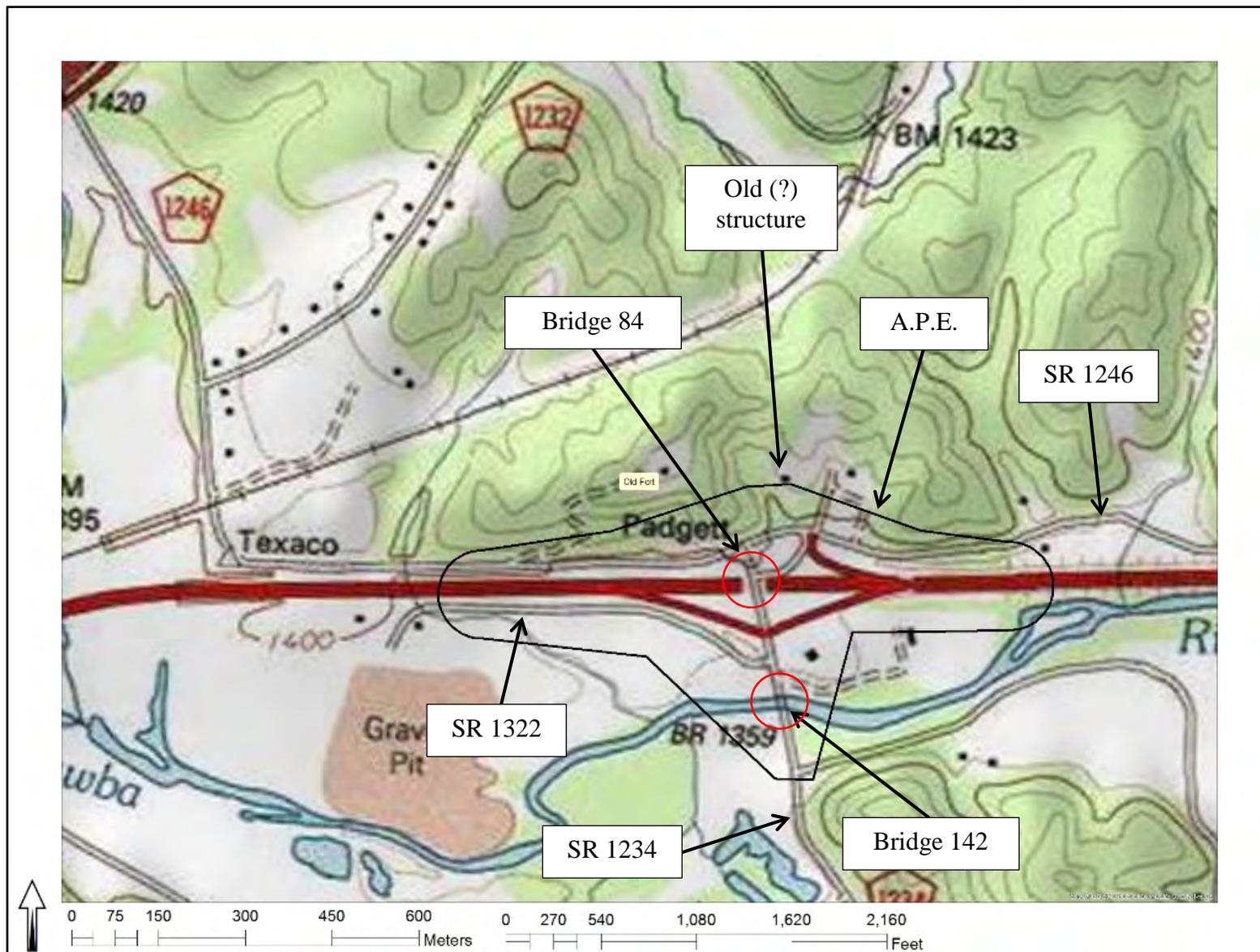
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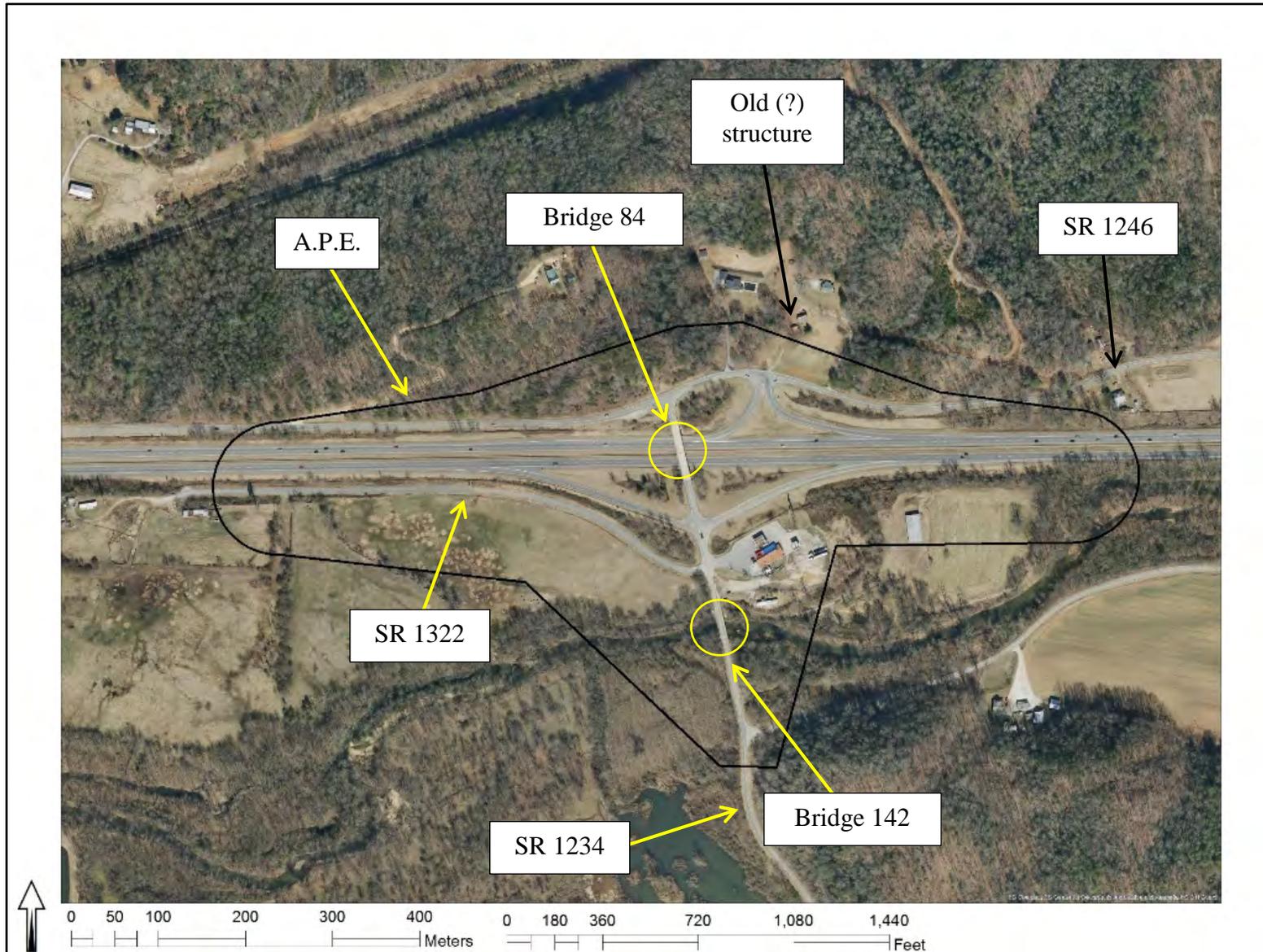
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Proposed fieldwork completion date









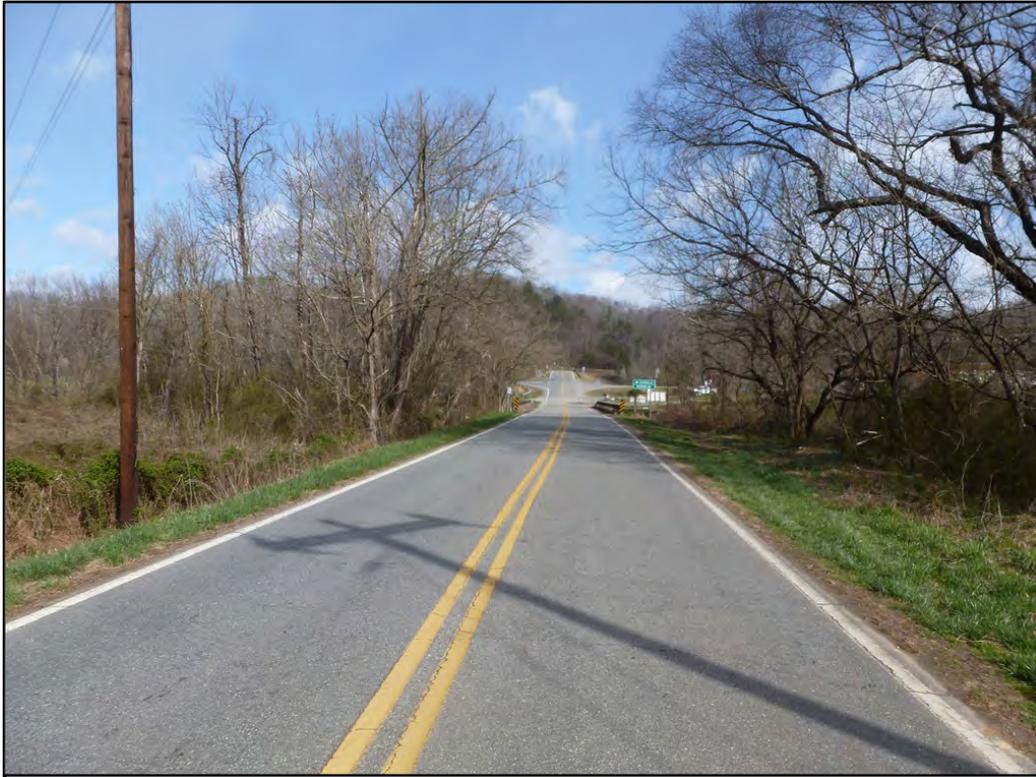


Figure 1: North view of Bridge 142 over the Catawba River



Figure 2: North view of the southeast quadrant of Bridge 142.



Figure 3: Northwest view of the southwest quadrant of Bridge 142.



Figure 4: South view of the southeast quadrant of Bridge 84.



Figure 5: West view of the southwest quadrant of Bridge 84.



Figure 6: North view of the southwest quadrant of Bridge 84.



Figure 7: North view of the northeast quadrant of Bridge 84.



Figure 8: Northeast view of the old structures in the northeast quadrant of Bridge 84.



Figure 9: West view of the northwest quadrant of Bridge 84.