Pre-Construction Notification



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

April 13, 2022 Ver 4.3

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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

Pre-Filing Meeting Date Request was submitted on: *

2/19/2021

If this is a courtesy copy, please fill in this with the submission date.

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

Rockingham

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: B-5721

WBS #*

45677.1.1 (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

1e. Is this notification solely	for the record because written approval is	s not required?	
		*	
For the record only for DWR	401 Certification:	Yes No No	
For the record only for Corp	s Permit:	Yes No	
1f. Is this an after-the-fact pe	ermit application?*		
Yes	No		
1g. Is payment into a mitigat If so, attach the acceptance letter fro	tion bank or in-lieu fee program proposed m mitigation bank or in-lieu fee program.	for mitigation of impacts?	
Ves	No		
Acceptance Letter Attachme Click the upload button or drag and d FILE TYPE MUST BE PDF	int irop files here to attach document		
1h. Is the project located in a	any of NC's twenty coastal counties?*		
Ves	No		
1j. Is the project located in a	designated trout watershed?*		
🔍 Yes 💿 No			
Link to trout information: http://	/www.saw.usace.army.mil/Missions/Regulator	ry-Permit-Program/Agency-Coordination/Trout.aspx	
B. Applicant Inf	formation		\odot
1a. Who is the Primary Cont	act?*		
		1c. Primary Contact Phone: *	
1b. Primary Contact Email: *		χασα-χαχ(χαχ)	
jldilday@ncdot.gov		(919)707-6111	
1d. Who is applying for the p	permit? *		
 Owner (Check all that apply) 		Applicant (other than owner)	
1e. Is there an Agent/Consul	tant for this project?*		
🔍 Yes 🖲 No			

State / Province / Region

NC

Country

USA

2. Owner Information

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

2b. Deed book and page no.:

2c. Contact Person: (for Corporations)

2d. Address*

-

Street Address 1000 Birch Ridge Drive Address Line 2 City

Raleigh Postal / Zip Code 27610

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6000

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address:*

maturchy@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

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1a. Name of project: *

B-5721 - Replacment of Bridge 124 on SR 2177 over Mayo River

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Madison		
2. Project Identification		\bigcirc
2a. Property Identification Number:	2b. Property size:	
(tax PIN or parcel ID)	(in acres)	
2c. Project Address		
Street Address		
Address Line 2		
City	State / Province / Region	
Postal / Zip Code	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: *	Longitude: *
36.392433	-79.952831
ex: 34.208504	-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *
Dan River
3b. Water Resources Classification of nearest receiving water: *
c
Surface Water Lookup
3c. What river basin(s) is your project located in?*
Roanoke

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

030101030409

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: *

Land use in the project vicinity consists primarily of agriculture fields and forestland, interspersed with maintained commercial and residential areas.

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) 500

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

The purpose of this project is to replace a structurally deficient bridge.

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

This project involves replacing the 235-foot, 7 span bridge with a 270-foot, 2 span on a new alignment, maintaining traffic on the existing bridge during construction. Standard road 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):	Matt Cleary		
Agency/Consultant Company:	Carolina Ecosystems, Inc.		
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

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1. Impacts Summary

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

Wetlands

Open Waters

Streams-tributaries
 Pond Construction

Buffers

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 *	3h. Impact length*
S1	Site2-bank stabilization	Permanent	Bank Stabilization	SB	Perennial	Both	2 Average (feet)	21 (linear feet)
S2	Site2/3-dewatering	Temporary	Dewatering	SB	Perennial	Both	2 Average (feet)	28 (linear feet)

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

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3i. Total jurisdictional ditch impact in square feet:
3i. Total permanent stream impacts:
21
3i. Total temporary stream impacts:
28
3i. Total stream and ditch impacts:
49
3j. Comments:
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4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Site #* (?)	4a1. Impact Reason	4b. Impact type * (?)	4c. Name of waterbody (?)	4d. Activity type*	4e. Waterbody type*	4f. Impact area *
1	workpads	Т	Mayo River	Causeway	Tributary	0.03 (acres)

4g. Total temporary open water Impacts:

0.03

4h. Comments:

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: *

The new bridge will completely span the Mayo River, removing two bents from the water. The bridge will also have a larger hydraulic opening. Deck water will not discharge into the river, and will have over 100 feet of of potential treatment before reaching the river. See stormwater management plan for additional minimization measures.

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

NCDOT's design standards in sensitive watersheds will be adhered to. A biological assessment was developed to address the Roanoke logperch, and a subsequent biological opinion (BO) was rendered by USFWS. No specific "Reasonable and Prudent Measures" were recommended in the BO due to minimization efforts developed during project design. However, the BO does have reporting requirements in the event of Roanoke logperch observance or potential erosion control measures.

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

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

Impacts to jurisdictional resources are minimal and are not considered a "Loss of Waters of the U.S."

No

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:

The Mayo River is not a designated buffer basin regulated under NCDWR.

2. Stormwater Management Plan

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

Yes No
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)

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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 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 N/A

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

5a. Will this project occur in or near an area w	vith federally protected species or habitat?*	
Yes	No	
5b. Have you checked with the USFWS conce	rning Endangered Species Act impacts?*	
Yes	No	
5c. If yes, indicate the USFWS Field Office you Raleigh	u have contacted.	
5d. Is another Federal agency involved?*		
Ves	No	Unknown
5e. Is this a DOT project located within Division	on's 1-8?*	
🖲 Yes 🔘 No		
5j. What data sources did you use to determin	ne whether your site would impact Endangered Species or Designated Critical	Habitat?*

N.C. Natural Heritage Program database; USFWS IPaC website query of project area which listed Roanoke logperch and James spinymussel. A biological conclusion of "May Affect, Likely to Adversely Affect" was rendered for Roanoke logperch. A biological conclusion of "May Affect, Not Likely to Adversely Affect" was rendered for James spinymussel. Formal consultation was initiated with USFWS and a Biological Opinion (BO) was issued on July 2022. No specific Reasonable or Prudent Measures were recommended in the BO. However there are reporting requirements within the BO in the event of Roanoke logperch observance or potential erosion control failures.

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?*

NMFS county index

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

No

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

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)?* No

Yes

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

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

8b. If yes, explain how project meets FEMA requirements:

NCDOT Hydraulics Unit coordination with FEMA

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

Miscellaneous

Comments

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

B-5721 Rockingham October 4 2022.pdf File must be PDF or KMZ

7.47MB

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 Turchy

Signature*

Hichael Tunchy

Date

10/3/2022

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Permit Drawings

Highway Stormwar (Version 3.00; Released	North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN STORMWATER MANAGEMENT PLAN rsion 3.00; Released August 2021) FOR NCDOT PROJECTS											
WBS Element:	45677.1.1	TIP/Proj No:	B-5721		County(ies):	Rockingham				Page	1	of 2
				G	eneral Project li	nformation	_					
WBS Element:		45677.1.1		TIP Number:	B-5721		Project	Туре:	Bridge Replacement		Date:	1/27/2022
NCDOT Contact:		Kristy Alford, PE				Contractor / Desig	ner:	Meme Buse	cemi, PE			
	Address:	NCDOT Century C	enter				Address:	5438 Wade	e Park Boulevard			
		1000 Birch Ridge I	Dr					Suite 200				
		Raleigh NC 27610						Raleigh, NO	C 27607			
	Phone:	919-707-6531					Phone:	919-854-62	200			
	Email:	kalford@ncdot.gov	ord@ncdot.gov				Email:	meme.buse	cemi@aecom.com			
City/Town:			Mad	ison, NC		County(ies):	Rockin	gham				
River Basin(s):		Roan	oke			CAMA County?	N	0				
Wetlands within Pro	ject Limits?	NO										
Destant Land All		0.00			Project Desc	ription Woodod/Posidentia	J					
Project Length (IIn.)	miles or feet):	0.28	mi	Surrounding	Land Use:	Wooded/ItesideIilia			Evistin v Oit			
Project Ruilt Upon /	(ac)		0.0	Proposed Proje								
Typical Cross Section	on Description:	Two 12-foot lanes	with 4' paved a	shoulder	ac.		Two 12-foot lanes with 4' paved shoulder					
	·		·									
Annual Avg Daily Tr	affic (veh/hr/day):	Design/Future	:	6096	Year:	2041	Existing:		4277		Ye	ar: 2022
General Proje	ect Narrative:	B-5721 is the repla	acement of exi	sting bridge 780124.	It is a 7-span (4@	@30', 1@55', 2@30')), 235' long bri	dge that car	ries SR2177 (Dan Valle	y Road) o	over the M	layo River. The
(Description of Min Quality I	imization of Water mpacts)	bridge consists of a stream impacts, th	a reinforced co e bridge config	ncrete deck on I-bea juration was set to p	ams. The replace lace the propose	ment bridge is a 2-s d pier outside of the	pan (1@129' a jurisdictional li	and 1@141') imits of the N) with 74" modified bulb t Mayo River.	tee girde	rs. In orde	r to minimize
		The existing bridge for pier removal. A	e piers are exp t no time shou	ected to be removed Id there be more that	from the Mayo F n one work pad o	River channel. Two te constructed at any give	emporary work ven time.	c pads are a	nticipated, one on each	bank of t	he River, t	to provide access
		Roadway drainage fill slope. The rip ra	will run along ap pad will diss	the length of the br ipate the energy of t	idge and be colle the pipe outflow a	cted into a 2GI on the ind prevent erosion.	e southwest si	ide of the bri	idge, outletting to a rip ra	ap pad at	t the botto	m of the roadway
		Existing drainage patterns were maintained as best possible.										
		Rip rap is used at pipe outlets to dissipate energy and prevent erosion.										

North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN STORMWATER MANAGEMENT PLAN ersion 3.00; Released August 2021) FOR NCDOT PROJECTS											
WBS Element: 45677.1.1	TIP/Proj No.:	B-5721	County(ies):	Rockingham		Page	2	of 2			
			General Project	Information							
			Waterbody Inf	formation							
Surface Water Body (1):		Mayo	River	NCDWR Stream Index No.:		22-30-(10)					
NCDWP Surface Water Classification fo	r Water Body		Primary Classification:	Class C							
NCDWR Sufface Water Classification to	water bouy		Supplemental Classification:								
Other Stream Classification:	None										
Impairments:	No	ne									
Aquatic T&E Species?	No	Comments:			i						
NRTR Stream ID:	Mayo River		T		Buffer Rules in Effect:			N/A			
Project Includes Bridge Spanning Water	r Body?	Yes	Deck Drains Discharge Over Bu	uffer?	Dissipator Pads Provided	d in Buffer?		- in a tife in the			
Deck Drains Discharge Over Water Bod	y?	No	(if yes, provide justification in	the General Project Narrative) (If yes, describe in the C	(If yes, describe in the General Project Narrative; if no, justify in the					
(If yes, provide justification in the	General Project Na	arrative)					141100)				
Surface Water Body (2):			ave Piver	NCDWR Stream Index No		22-30-(10)					
			Brimary Classification:	Class C		22-30-(10)		1			
NCDWR Surface Water Classification fo	r Water Body		Supplemental Classification:	None				1			
Other Stream Classification:	No	ne									
Impairments:	No	ne									
Aquatic T&E Species?	No	Comments:					1				
NRTR Stream ID:	SA				Buffer Rules in Effect:			N/A			
Project Includes Bridge Spanning Water	r Body?	No	Deck Drains Discharge Over Bu	uffer? N/A	Dissipator Pads Provide	d in Buffer?		N/A			
Deck Drains Discharge Over Water Bod	y?	N/A	(If yes, provide justification in	the General Project Narrative) (If yes, describe in the C	eneral Project Na	iarrative; if no	o, justify in the			
(If yes, provide justification in the	General Project Na	arrative)					Tauve)				
						00.00 (10)					
Surface Water Body (3):		UT to Ma		NCDWR Stream Index No.:		22-30-(10)					
NCDWR Surface Water Classification fo	r Water Body		Primary Classification:	Class C				-			
			Supplemental Classification:	None		_		-			
Other Stream Classification:	No	ne									
Impairments:	No	ne									
Aquatic T&E Species?	No	Comments:						-			
NRTR Stream ID:	SB				Buffer Rules in Effect:			N/A			
Project Includes Bridge Spanning Water	r Body?	No	Deck Drains Discharge Over Bu	uffer? N/A	Dissipator Pads Provide	d in Buffer?		N/A			
Deck Drains Discharge Over Water Bod	y?	N/A	(If yes, provide justification in	the General Project Narrative) (If yes, describe in the C	General Project N	larrative; if n	o, justify in the			
(If yes, provide justification in the	General Project Na	arrative)			Ge	neral Project Na	rative)				







5/28/99								PERM		PROJECT REFERENCE N <u>B</u> -5721 ROADWAY DESIGN ENGINEER	0. SHEET NO. 6 HYDRAULICS ENGINEER
					L STA. 21+64 _L_						ARY PLANS
	L STA. 16 + _DW1_ STA. 1	67.22 0+00.00		1@129', 1@1 74" MODIFI W/4' END B	41' ED BULB TEE GIRE ENT CAPS	DERS			$\begin{array}{c cccc} PI = & 23+85.00 \\ \hline EL = & 574.35' \\ VC & = & 280' \\ K & = & 85 \end{array}$	DO NOT USE FO	CONSTRUCTION
<u></u> <u>5</u> 80	BEGIN TIP PROJECT B-5721		PI = 18+00.00 FI = 567.96'	G.P. ELEV = SKEW =	571.94′ I07			(<i>-)2.</i> 2/57%		Prepared in the Office of:	NC FIRM LICENSE No: F-0342 5438 Wade Park, Boulevard, Suite 20 Ralelab, NC 27607
1-pfl.c	-L- STA. 15 + 46.00 FL = 556 10'		VC = 310' K = 87					(+)1.0923%	(-18 2)57.	DOCUMENT NOT	
<u>ب</u> 570 ي			(+)1.05	923%					<u> </u>		
era-we			(+)4.66957.								22157%
560										EXISTING GROUND	560
B-10/s60			BRIDGE HYDRAULIC	DAT A			=541.3				550
The John Market Ma			DESIGN FREQUENCY = 50 DESIGN FW ELEVATION = 55: BASE DISCHARGE = 28, BASE FREQUENCY = 100 BASE HW ELEVATION = 55; OVERTOPPING DISCHARGE = 17.0 OVERTOPPING FREQUENCY = 104	4.3 FT 800 CFS 5.5 FT GI 5.6 CFS 5.5 FT GI 5.6 CFS 7.8 EX	ROUND LINE @		$\frac{1}{2} \frac{1}{1} \frac{1}$	0.3'			540
530			OVERTORPING ELEVATION = 55, OT AT -L- STA.12+00 ELEV = 55,	I.2 FT							530
			DATE OF SURVEY = 11/0 W.S.ELEVATION AT DATE OF SURVEY = 540	07/2018 0.3 FT	TEMP. WO	RK PAD & TEMP	R			BM#2 -L- STA.23+76.2168.4 -LEV=556.33'	18' LEFT
520										PIRE IN ZU STCAMUR	520
P\Hydr						-L- ST A.21+12 ELEV=556.55' SPIKE IN 20" N	APLE TREE				
	13 14 15	16	17 18	19	20	21 2	2 23		24	PLAN VIEW PEE SHE	4 510
a_CADN7a_N			PIPE HYD 54" RCI	DRAULIC DATA P Sta. 30+57				-Y- ST	A. $10 + 00.00 = -Y$		
DIEVSIO DE			DRAINAGE AREA DESIGN FREQUENCY DESIGN DISCHARGE DESIGN HW FLEVAT	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				EL =	565.71 GRADE		
ت <mark>600</mark>			IOO YEAR DISCHARG	E = 90.0 CFS ATION = 562.59 FT					545 25'		
-1225-	$P_{l} = 23+85.00$	<u>-L- STA. 28+69.93</u> -Y- STA. 10+00.00	OVERTOPPING FREQ OVERTOPPING DISCH	UENCY = 200+ YRS IARGE = 140 CFS	END	TIP PROJECT B-572	<u>1</u> 500		END GRADE	5.00	500
MU SMU			VERTOPPING ELEVA	4 <u>TYON = 564.9 F1</u>	END (_L_ ST	GRADE A. 30+40.00 564 97'	590	PI = 10+ EL = 56 VC = 52	$\begin{array}{c c c c c c c c c c c c c c c c c c c $, <i>r</i>	590
580		PI = 26+95.00 $EL = 567.48'$ $VC = 150'$		= 29+65.00			580	K = 7			580
¹⁹²⁹⁰⁹⁰⁹ 570	(-)2.2157%	K = 125		= 150' = 114			570	(-)3.8///%			570
t s	(-)2	21577 (-++01357,					Si c		FIPE C		
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								PACTS SUM	MARY			
			WETLAND IMPACTS SURFACE WATER IMPACTS									
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 21+54 to 22+40	2-Span Bridge (1@129', 1@141')							0.03		54	
2	-L- 30+25 to 30+58 RT	54" Pipe / Bank Stabilization						< 0.01	< 0.01	21	20	
3	-L- 30+54 to 30+65 LT	54" Pipe							< 0.01		8	
TOTAL	S*:							< 0.01	0.03	21	82	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS 01/27/2022 ROCKINGHAM COUNTY B-5721 45677.1.1 SHEET 8 OF 8

Revised 2018 Feb

Protected Species/ Section 7

Biological Opinion

Replacement of Bridge No. 124 on SR 2177 Over the Mayo River, Rockingham County, North Carolina TIP number B-5721

FWS Project Code #: 2022-0043263



Prepared by:

U.S. Fish and Wildlife Service Raleigh Field Office P.O. Box 33726 Raleigh, NC 27636-3726

July 5, 2022

Tom Augspurger, Deputy Field Supervisor

Date

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CONSULTATION HISTORY

This section lists key events and correspondence during the course of this consultation. A complete administrative record of this consultation is on file with the Service's Raleigh Field Office.

- **2021-12-06** The Service began discussions with the North Carolina Department of Transportation (NCDOT) regarding the need for formal Section 7 consultation.
- 2022-03-24 The Service received a draft Biological Assessment (BA) from the NCDOT.
- 2022-03-28 The Service provided comments on the draft BA.
- **2022-05-12** The Service received a final BA dated 2022-05-06 and a letter from the Federal Highway Administration (FHWA) requesting initiation of formal Section 7 consultation.
- **2022-05-24** The Service provided a letter to the FHWA stating that all information required for initiation of formal consultation was either included with their 2022-05-12 letter or was otherwise available.
- 2022-06-02 The Service provided the FHWA and NCDOT with a draft Biological Opinion.

BIOLOGICAL OPINION

1. INTRODUCTION

A biological opinion (BO) is the document that states the findings of the U.S. Fish and Wildlife Service (Service) required under section 7 of the Endangered Species Act of 1973, as amended (ESA), as to whether a Federal action is likely to:

- jeopardize the continued existence of species listed as endangered or threatened; or
- result in the destruction or adverse modification of designated critical habitat.

The Federal action addressed in this BO is the Federal Highway Administration's (FHWA) funding of the North Carolina Department of Transportation's (NCDOT) proposed replacement of Bridge No. 124 on SR 2177 over the Mayo River, Rockingham County, North Carolina, TIP number B-5721 (Action). This BO considers the effects of the Action on the Roanoke Logperch. The Action does not affect designated critical habitat; therefore, this BO does not address critical habitat.

The Service previously concurred with the NCDOT's conclusion that the Action is not likely to adversely affect the James Spinymussel by letter dated February 28, 2022. This concurrence fulfilled the FHWA's responsibilities for the Action under (a)(2) of the ESA for this species. We do not further address this species in this BO.

BO Analytical Framework

A BO that concludes a proposed Federal action is *not* likely to *jeopardize the continued existence* of listed species and is *not* likely to result in the *destruction or adverse modification* of critical habitat fulfills the Federal agency's responsibilities under $\S7(a)(2)$ of the ESA.

"Jeopardize the continued existence means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR §402.02).

"*Destruction or adverse modification* means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species" (50 CFR §402.02).

The Service determines in a BO whether we expect an action to satisfy these definitions using the best available relevant data in the following analytical framework (see 50 CFR §402.02 for the regulatory definitions of *action, action area, environmental baseline, effects of the action,* and *cumulative effects*).

- a. *Proposed Action*. Review the proposed Federal action and describe the environmental changes its implementation would cause, which defines the action area.
- b. *Status*. Review and describe the current range-wide status of the species or critical habitat.
- c. *Environmental Baseline*. Describe the condition of the species or critical habitat in the action area, without the consequences to the listed species caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or

private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early consultation, and the impacts of State or private actions which are contemporaneous with the consultation.

- d. *Effects of the Action*. Predict all consequences to species or critical habitat caused by the proposed action, including the consequences of other activities caused by the proposed action, which are reasonably certain to occur. Activities caused by the proposed action would not occur but for the proposed action. Effects of the action may occur later in time and may include consequences that occur outside the action area.
- e. *Cumulative Effects*. Predict all consequences to listed species or critical habitat caused by future non-Federal activities that are reasonably certain to occur within the action area.
- f. *Conclusion*. Add the effects of the action and cumulative effects to the environmental baseline, and in light of the status of the species, formulate the Service's opinion as to whether the action is likely to jeopardize species or adversely modify critical habitat.

2. PROPOSED ACTION

The NCDOT proposes to replace Bridge No. 124 on SR 2177 over the Mayo River in Rockingham County, North Carolina (Action). The Action is federally funded by the Federal Highway Administration. The existing bridge was constructed in 1965 and is considered structurally deficient. Components of both the superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. The existing bridge is a 217 feet long, seven-span structure with two interior bents within the Mayo River.

2.1. Construction of New Bridge

The new bridge will be a two-span structure with one span at 129 feet and the other at 141 feet, totaling 270 feet. The new bridge will first be constructed adjacent and upstream to the current structure and will completely span the river. Approach work for both ends of the new bridge will include tree clearing and placement of fill material to raise and extend the existing roadbed upstream of the current roadbed. Class II rip rap will be placed adjacent to both bridge end bents for protection of the bents. Minor improvements will be made to the SR 2177/SR 2174 intersection near the northeastern end of the project limits.

2.2. Demolition of Existing Bridge

The existing bridge is to remain as a detour structure until the new bridge is completed. After completion of the new bridge, the existing bridge will be removed in a top-down manner with the portion of the bridge over the river cut into pieces and removed by a crane. Temporary causeways, to be located just upstream of the existing bridge, will be used to facilitate the removal of the structure. The causeways will extend from one riverbank and then the other so that no more than 50 % of the river channel will be blocked at one time. The area around each bent in the river will be dewatered, and the existing piles will be cut off one foot below the riverbed. Materials used for stabilization, causeway fill, and much of the old approach fill will be removed.

2.3. Conservation Measures

The following will be incorporated into the design and construction of the Action to avoid and minimize effects to the Mayo River.

Regardless of the surface water quality classification, NCDOT will adhere to Design Standards in Sensitive Watersheds described in 15A NCAC 04B.0124.

- (a) Uncovered areas in High Quality Water (HQW) zones shall be limited to a maximum total area of 20 acres within the boundaries of the tract. Only the land-disturbing activity within a HQW zone shall be governed by this Rule. Larger areas may be uncovered within the boundaries of the tract with the written approval of the Director upon providing engineering justification with a construction sequence that considers phasing, limiting exposure, weekly submitted self- inspection reports, and more conservative design than the 25-year storm. The Director may also stipulate the inclusion of other conditions in the plan as necessary based on specific site conditions.
- (b) Erosion and sedimentation control measures, structures, and devices within HQW zones shall be planned, designed, and constructed to provide protection from the runoff of the 25-year storm that produces the maximum peak rate of runoff as calculated according to procedures in the United States Department of Agriculture, Natural Resources Conservation Service's "National Engineering Field Handbook 630 for Conservation Practices." Other methodologies may be used if based on generally accepted engineering standards that are shown to the Division to be equivalent to or improved over the procedures in Handbook 630. The Division shall determine acceptability of an alternative methodology based upon a showing that the runoff model used was based on observed data in agreement with the predictive model.
- (c) In order to provide for water quality protection in HQW zones, sediment basins that discharge to those areas shall be designed and constructed to meet the following criteria:
 - (1) use a surface withdrawal mechanism, except when the basin drainage area is less than 1.0 acre;
 - (2) have a minimum of 1800 cubic feet of storage area per acre of disturbed area;
 - (3) have a minimum surface area of 325 square feet per cfs of Q25 peak inflow;
 - (4) have a minimum dewatering time of 48 hours; and
 - (5) incorporate 3 baffles, unless the basin is less than 20 feet in length, in which case 2 baffles shall be sufficient.
- (d) Upon a written request of the applicant, the Director may allow alternative design or control measures in lieu of meeting the conditions required in Subparagraphs (c)(2) through (c)(5) of this Rule if the applicant demonstrates that meeting all of those conditions will result in design or operational hardships and that the alternative measures will provide an equal or more effective level of erosion and sedimentation control on the site. Alternative measures may include quicker application of ground cover, use of sediment flocculants, and use of enhanced ground cover practices.

(e) Newly constructed open channels in HQW zones shall be designed and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization, unless soil conditions permit a steeper slope or where the slopes are stabilized by using mechanical devices, structural devices, or other forms of ditch liners proven to the Division as being effective in restraining accelerated erosion. The angle for side slopes shall be sufficient to restrain accelerated erosion

Special procedures will also be used for clearing and grubbing, grading operations, seeding and mulching, and staged seeding within the project. NCDOT will designate the affected area as an Environmentally Sensitive Area.

• Clearing and Grubbing

In areas identified as Environmentally Sensitive Areas, the Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations as described in Article 200-1 of the Standard Specifications. Only clearing operations (not grubbing) shall be allowed in this buffer zone until immediately prior to beginning grading operations. Erosion control devices shall be installed immediately following the clearing operation.

Grading

Once grading operations begin in identified Environmentally Sensitive Areas, work shall progress in a continuous manner until complete. All construction within these areas shall progress in a continuous manner such that each phase is complete, and areas are permanently stabilized prior to beginning of next phase. Failure on the part of the contractor to complete any phase of construction in a continuous manner in Environmentally Sensitive Areas will be just cause for the Engineer to direct the suspension of work in accordance with Article 108-7 of the Standard Specifications.

• Seeding and Mulching

Seeding and mulching shall be performed in accordance with Section 1660 of the Standard Specifications and vegetative cover sufficient to restrain erosion shall be installed immediately following grade establishment. Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment. No appreciable time shall lapse into the contract time without stabilization of slopes, ditches, and other areas within the Environmentally Sensitive Areas.

• Stage Seeding

The work covered by this section shall consist of the establishment of a vegetative cover on cut and fill slopes as grading progresses. Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area. Each stage shall not exceed the limits stated above.

All applicable Best Management Practices (BMPs) from the following documents will be used during project design and construction: Erosion and Sediment Control Design and Construction Manual (NCDOT 2015); Stormwater Best Management Practices Toolbox (NCDOT 2014); and Best Management Practices for Construction and Maintenance Activities (NCDOT 2003).

Project design calls for the elimination of the two bents currently within the Mayo River channel. The proposed new bridge will completely span the river.

2.4. Other Activities Caused by the Action

A BO evaluates all consequences to species or critical habitat caused by the proposed Federal action, including the consequences of other activities caused by the proposed action, that are reasonably certain to occur (see definition of "effects of the action" at 50 CFR §402.02). Additional regulations at 50 CFR §402.17(a) identify factors to consider when determining whether activities caused by the proposed action (but not part of the proposed action) are reasonably certain to occur. These factors include, but are not limited to:

- (1) past experiences with activities that have resulted from actions that are similar in scope, nature, and magnitude to the proposed action;
- (2) existing plans for the activity; and
- (3) any remaining economic, administrative, and legal requirements necessary for the activity to go forward.

Existing power and phone lines north of the existing bridge will be relocated slightly north of their current location. A PNG/Duke Energy gas line will be relocated. Although plans for the gas line relocation are not finalized, the most likely action would involve boring underneath the Mayo River and staying within the new road right-of-way. Our evaluation of this Action assumes this construction methodology. If trenching or another methodology is utilized, additional analysis may be required under a separate action.

2.5. Action Area

The Action Area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR §402.02). Delineating the Action Area is necessary for the Federal action agency to obtain a list of species and critical habitats that may occur in that area, which necessarily precedes any subsequent analyses of the effects of the action to particular species or critical habitats.

It is practical to treat the Action Area for a proposed Federal action as the spatial extent of its direct and indirect "modifications to the land, water, or air" (a key phrase from the definition of "action" at 50 CFR §402.02). Indirect modifications include those caused by other activities that would not occur but for the action under consultation. The Action Area determines any overlap with critical habitat and the physical and biological features therein that we defined as essential to the species' conservation in the designation final rule. For species, the Action Area establishes the bounds for an analysis of individuals' exposure to action-caused changes, but the subsequent consequences of such exposure to those individuals are not necessarily limited to the Action Area.



Figure 2.5 shows the locations of all activities that the proposed Action would cause and the spatial extent of reasonably certain changes to land, water, or air caused by these activities, based on the descriptions and analyses of these activities in sections 2.1–2.4. The Action Area for this BO includes the SR 2177 right-of-way at Rockingham County Bridge No. 124, beginning approximately 470 feet from the southwest end of the new bridge and extending just past SR 2174 for a total of approximately 900 feet, plus the Mayo River for a distance of 328 feet (100 meters) upstream to 1,312 feet (400 meters) downstream and extending slightly into the Dan River. The Action Area consists mainly of a maintained/disturbed roadside vegetative community, the SR 2177 pavement and bridge structure, the Mayo River channel, and a small amount of riparian forest.

3. SOURCES OF CUMULATIVE EFFECTS

A BO must predict the consequences to species caused by future non-Federal activities within the Action Area, *i.e.*, cumulative effects. "Cumulative effects are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation" (50 CFR §402.02). Additional regulations at 50 CFR §402.17(a) identify factors to consider when determining whether activities are reasonably certain to occur. These factors include, but are not limited to: existing plans for the activity; and any remaining economic, administrative, and legal requirements necessary for the activity to go forward.

In its request for consultation, the FHWA did not describe, and the Service is not aware of, any future non-Federal activities that are reasonably certain to occur within the Action Area. Therefore, we anticipate no cumulative effects that we must consider in formulating our opinion for the Action.

4. STATUS OF SPECIES

This section summarizes best available data about the biology and condition of the Roanoke Logperch (RLP, *Percina rex*) throughout its range that are relevant to formulating an opinion about the Action. The Service published its decision to list the RLP as endangered on August 18, 1989 (54 FR 34468–34472). No critical habitat has been designated for the species. The Species Status Assessment (SSA) Report was published in 2022 (USFWS 2022).

4.1. Species Description

The RLP is a large darter with an elongate body up to 165 mm in total length (Roberts and Rosenberger 2008). It has a bulbous snout, eight to 11 lateral blotches, dorsal scrawling, and an orange streak on the first dorsal fin which is especially vivid in mature males (Jenkins and Burkhead 1994).

4.2. Life History

The RLP is a benthic invertivore that uses a feeding tactic whereby it flips pebbles and gravels with its snout and eats the exposed invertebrates. Because of this specialized feeding behavior,

they prefer habitat with loose, unembedded, and unsilted substrates and substrates of a size that are easily flipped (Rosenberger and Angermeier 2003, Lahey and Angermeier 2007). The maximum life span is approximately 6.5 years (Burkhead 1983), and reproductive maturity occurs at 2-3 years (Jenkins and Burkhead 1994). Spawning occurs in April or May in deep runs over gravel and small cobble. Logperch typically deposit their eggs and provide no subsequent parental care (Jenkins and Burkhead 1994). For additional life history information, see Section 2.2 of the SSA (USFWS 2022).

4.3. Numbers, Reproduction, and Distribution

The RLP is endemic to the Roanoke, Dan, and Chowan basins of Virginia and North Carolina. The known geographic distribution of RLP has expanded dramatically over time, from four streams by the end of the 1940s to 14 streams by the time of its ESA listing in 1989 to 31 streams currently. Because survey effort also increased dramatically over this time, we cannot determine whether RLP's range increased because of true range expansion via dispersal, new discovery of existing but undiscovered populations, or both. The species' current distribution is assessed as four metapopulations (Roanoke Mountain, Roanoke Piedmont, Dan, and Chowan). Each of these metapopulations harbors 1-5 demographically independent management units (MUs) with a total of 11 currently occupied MUs extending 2033.7 km. More detailed information regarding numbers, reproduction, and distribution can be found in Table 5, Section 2.3, and Section 3.5 of the SSA (USFWS 2022).

4.4. Conservation Needs and Threats

The RLP was listed as endangered under the ESA in 1989 based on its small geographic range, vulnerability to anthropogenic impacts like urbanization, reservoir construction, and water pollution, and projected future increases of those threats. Six factors have a particularly strong influence on RLP condition. First, fine-sediment deposition emanating from urbanization, agriculture, and other sources smothers eggs and reduces feeding efficiency, potentially resulting in reduced growth, survival, and recruitment. Second, chronic chemical pollution reduces habitat suitability for RLP, and acute pollution events reduce survival and population size. Third, dams and other barriers inhibit fish movement, fragmenting populations into smaller areas and reducing demographic rescue and gene flow among populations. Fourth, climate change may alter hydrology and sediment delivery by increasing flood magnitudes and flow variability in general, reducing flow predictability, decreasing summer/fall base flows, and increasing erosion and runoff of sediment, potentially reducing habitat suitability for all age-classes of RLP and increasing direct mortality of vulnerable juveniles during spring floods. Fifth, existing legal and regulatory mechanisms such as ESA protections, the U.S. Clean Water Act, and state-level equivalents likely benefit the species through prohibitions on activities that may cause take and by facilitating funding opportunities that can be used for RLP research and conservation. Sixth, management activities aimed at improving habitat quality (e.g., riparian revegetation to reduce silt loading), restoring habitat connectivity (e.g., removing dams), and directly manipulating populations through propagation, augmentation, reintroduction, translocation, and introduction of fish could increase the resiliency and redundancy of populations. More detailed information regarding conservation needs and threats can be found in Section 3.3 of the SSA (USFWS 2022).

5. ENVIRONMENTAL BASELINE

This section describes the best available data about the condition of the RLP in the Action Area without the consequences caused by the proposed Action.

5.1. Action Area Numbers, Reproduction, and Distribution

Three surveys utilizing electrofishing into a stationary seine have been conducted within or adjacent to the Action Area (November 8, 2016; June 5, 2019; and August 10, 2021). The 2019 and 2021 surveys each yielded a single RLP. The length of each survey was approximately 250 meters (as opposed to the normal 500 meters), with better quality habitat occurring upstream of the existing bridge. Roberts et al. (2016) generated a capture probability for RLP of 0.092 for surveys consisting of electrofishing into a stationary seine. For each of the two surveys that found one RLP, one can be divided by 0.092 to calculate 10.87 individuals potentially present during each of the surveys. Taking the average number of individuals for the three surveys (10.87 + 10.87 + 0) / 3 would result in 7.24 individuals potentially present within the survey reach. Since the survey reach for the three surveys included only 250 meters of the 500 meter Action Area, the calculated number of individuals would be doubled to 14.48. Rounding down, it is estimated that 14 RLP could be present within the Action Area.

5.2. Action Area Conservation Needs and Threats

The Action Area covers approximately 0.9% of the Lower Mayo River MU (0.5 km/54.2 km) and represents approximately 0.02% (0.5 km/2033.7 km) of all habitat within the 11 occupied MUs. The Action Area has the same conservation needs and threats listed in Section 4.4. However, given its proximity to the Towns of Madison and Mayodan, the Action Area has increased threats from continuing urbanization. The adverse effects to aquatic systems from increased urbanization and impervious surface is well understood (Wheeler et al. 2005, Rosenberger 2007).

6. EFFECTS OF THE ACTION

In a BO for a listed species, the effects of the proposed action are all reasonably certain consequences to the species caused by the action, including the consequences of other activities caused by the action. Activities caused by the action would not occur but for the action. Consequences to species may occur later in time and may occur outside the action area.

We identified and described the activities included in the proposed Action in sections 2.1–2.3. We identified and described other activities caused by the proposed Action in section 2.4. Our analyses of the consequences caused by each of these activities follows.

6.1. Construction of New Bridge

The greatest potential for adverse effects to RLP from the Action is prolonged erosion of the disturbed area on and along the banks of the river within the Action Area during the construction

of the bridge, placement of rip rap, and approach road earthwork. A major storm event could erode soil from within the disturbed construction area and wash it into the river, potentially clogging their gills, interfering with feeding, burying eggs, and otherwise degrading habitat. To avoid or minimize the potential for this effect, NCDOT has developed stringent erosion control measures and other conservation measures (see Section 2.3) which greatly reduce the likelihood of sediment entering the stream. Even in the unlikely event of catastrophic failure of erosion control measures, the effects of the Action are likely sub-lethal for adults. Given the mobility of the species under normal flow conditions, RLP could temporarily relocate to areas of better habitat upstream of the bridge.

6.2. Demolition of Existing Bridge

Habitat for RLP may be affected by the removal of the two in-channel bents and temporary causeways. Disturbed sediment could redeposit downstream within RLP habitat. However, the increased turbidity and substrate disturbance would be temporary and have sub-lethal effects on adults. Upstream or downstream movements of RLP could be hindered temporarily by the disturbance created during bent removal and the placement/removal of the temporary causeways. The removal of the existing bents in the channel will likely alter flow patterns at the bridge thus forcing the stream to reach a new equilibrium. Though some minimal sediment deposition may occur due to a localized reduction of velocity, the effect is likely minimal and possibly undetectable.

The removal of the existing in-channel bents and the commitment to completely span the channel will have beneficial effects. Given that in-channel bents can trap debris during high flows and can change stream hydraulics in the immediate vicinity of the structure (causing scour and deposition), the elimination of the in-channel bents is expected to reduce the bridge's effects on flow patterns. Also, given that large debris piles must often be removed from in-channel bents (creating additional channel disturbance and downstream sedimentation), the elimination of the in-channel bents removed from in-channel bents (creating additional channel disturbance and downstream sedimentation), the elimination of the in-channel bents will thus preclude future disturbance from debris removal. The lengthening of the bridge from 217 feet to 270 feet and increasing the hydraulic opening under the bridge will allow the river to access more of its floodplain, thus potentially reducing downstream bank scouring and sedimentation.

6.3. Conservation Measures

The conservation measures are primarily designed to minimize erosion, sedimentation, and turbidity, thus reducing the potential for effects to the species.

6.4. Other Activities Caused by the Action

The relocation of power, phone, and gas lines could potentially contribute minor sediment input into the river. However, the use of construction BMPs will reduce the potential for effects.

6.5. Summary

It is estimated that up to 14 RLP may occur within the Action Area at any time and could thus be harmed. Given the highly mobile nature of the species, the Action is unlikely to kill any RLP. However, erosion of sediment into the river and increased turbidity could harm RLP by clogging their gills, interfering with feeding, burying eggs, and otherwise degrading habitat. The use of BMPs and other conservation measures will minimize the potential for such effects. The movements of RLP could temporarily be impeded by in-channel disturbance. Overall, the Action has significant beneficial effects with the removal of in-channel bents and increasing the hydraulic opening under the bridge, thus improving RLP in the long-term.

7. CUMULATIVE EFFECTS

In Section 3, we did not identify any activities that satisfy the regulatory criteria for sources of cumulative effects. Therefore, cumulative effects to RLP are not relevant to formulating our opinion for the Action.

8. CONCLUSION

In this section, we summarize and interpret the findings of the previous sections (status, baseline, effects, and cumulative effects) relative to the purpose of the BO for the RLP, which is to determine whether the Action is likely to jeopardize its continued existence.

The RLP is endemic to the Roanoke, Dan, and Chowan basins of Virginia and North Carolina, and its known range has expanded from 14 streams at the time of its ESA listing in 1989 to 31 streams currently. The species current distribution consists of 11 occupied MUs. The Action Area represents only about 0.02% of all known occupied habitat. The estimated number of RLP present in the Action Area is up to 14 individuals. While mortality of RLP is unlikely, individuals within the Action Area may be temporarily harmed by the effects of sedimentation or by disturbance from in-water work. Conservation measures designed to reduce erosion and sedimentation will minimize such effects. Long-term, the elimination of in-channel bents and increasing the hydraulic opening underneath the bridge will likely improve RLP habitat.

After reviewing the status of the species, the environmental baseline for the Action Area, the effects of the Action and the cumulative effects, it is the Service's biological opinion that the Action is not likely to jeopardize the continued existence of the RLP.

9. INCIDENTAL TAKE STATEMENT

ESA §9(a)(1) and regulations issued under §4(d) prohibit the take of endangered and threatened fish and wildlife species without special exemption. The term "take" in the ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (ESA §3(19)). In regulations, the Service further defines:

• "harm" as "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife

by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering;" (50 CFR §17.3) and

• "incidental take" as "takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant" (50 CFR §402.02).

Under the terms of ESA (b)(4) and (c)(2), taking that is incidental to a Federal agency action that would not violate ESA (c)(2) is not considered prohibited, provided that such taking is in compliance with the terms and conditions of an incidental take statement (ITS).

For the exemption in ESA (0)(2) to apply to the Action considered in this BO, the FHWA must undertake the non-discretionary measures described in this ITS, and these measures must become binding conditions of any permit, contract, or grant issued for implementing the Action. The FHWA has a continuing duty to regulate the activity covered by this ITS. The protective coverage of (0)(2) may lapse if the FHWA fails to:

- assume and implement the terms and conditions; or
- require a permittee, contractor, or grantee to adhere to the terms and conditions of the ITS through enforceable terms that are added to the permit, contract, or grant document.

9.1. Amount or Extent of Take

This section specifies the amount or extent of take of listed wildlife species that the Action is reasonably certain to cause, which we estimated in the "Effects of the Action" section of this BO. We estimate take of RLP of up to 14 individuals. This take is expected to be sub-lethal in nature for adults.

9.2. Reasonable and Prudent Measures

The Service believes that no reasonable and prudent measures are necessary or appropriate to minimize the amount or extent of incidental take of RLP caused by the Action. Avoidance and minimization of RLP habitat previously occurred during the routine project development and design process. Minor changes that do not alter the basic design, location, scope, duration, or timing of the Action would not reduce incidental take below the amount or extent anticipated for the Action as proposed. Therefore, this ITS does not provide RPMs for this species.

9.3. Terms and Conditions

No reasonable and prudent measures to minimize the impacts of incidental take caused by the Action are provided in this ITS; therefore, no terms and conditions for carrying out such measures are necessary.

9.4. Monitoring and Reporting Requirements

In order to monitor the impacts of incidental take, the FHWA must report the progress of the Action and its impact on the species to the Service as specified in the ITS (50 CFR 402.14(i)(3)). This section provides the specific instructions for such monitoring and reporting

(M&R), including procedures for handling and disposing of any individuals of a species actually killed or injured. These M&R requirements are mandatory.

As necessary and appropriate to fulfill this responsibility, the FHWA must require any permittee, contractor, or grantee to accomplish the M&R through enforceable terms that the FHWA includes in the permit, contract, or grant document. Such enforceable terms must include a requirement to immediately notify the FHWA and the Service if the amount or extent of incidental take specified in this ITS is exceeded during Action implementation.

M&R1. Disposition of Dead RLP

If dead fish suspected of being RLP are observed during the construction and demolition activities of the Action, such fish should collected (if can be safely done) and preserved for identification. Since RLP generally do not exceed 165 mm (6.6 inches), no dead fish larger than this need to be collected. Collected fish should ideally be preserved in 95% non-denatured ethyl alcohol/ethanol. If no ethyl alcohol is initially available, the fish may be temporarily stored on ice (not frozen) until ethyl alcohol is available. The fish should initially be submitted to the NCDOT Biological Surveys Group (Jared Gray, phone 919-707-6120) as soon as possible for identification. If determined to be RLP, the Service's Raleigh Field Office must be notified.

M&R2. Erosion Control Measures Failure

In the event of any visible sediment loss within the Action Area, a review of turbidity levels will be made upstream and downstream 400 meters (0.25 mile) to determine if sedimentation effects are occurring beyond 400 meters downstream. If visual observation of turbidity levels downstream appear to be elevated beyond upstream observations, the project inspector will contact the Division Environmental Officer. If determined that project-related sedimentation is occurring beyond 400 meters, the Service's Raleigh Field Office must be contacted immediately to discuss potential remediation.

10. CONSERVATION RECOMMENDATIONS

§7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by conducting conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary activities that an action agency may undertake to avoid or minimize the adverse effects of a proposed action, implement recovery plans, or develop information that is useful for the conservation of listed species. The Service offers the following recommendations that are relevant to the listed species addressed in this BO and that we believe are consistent with the authorities of the FHWA.

1. Contribute funding to any ongoing or future RLP research, monitoring, or conservation efforts conducted by others.
11. REINITIATION NOTICE

Formal consultation for the Action considered in this BO is concluded. Reinitiating consultation is required if the FHWA retains discretionary involvement or control over the Action (or is authorized by law) when:

- a. the amount or extent of incidental take is exceeded;
- b. new information reveals that the Action may affect listed species or designated critical habitat in a manner or to an extent not considered in this BO;
- c. the Action is modified in a manner that causes effects to listed species or designated critical habitat not considered in this BO; or
- d. a new species is listed or critical habitat designated that the Action may affect.

12. LITERATURE CITED

- Burkhead, N.M. 1983. Ecological studies of two potentially threatened fishes (the orangefin madtom, *Noturus gilbert* and the Roanoke logperch, *Percina rex*) endemic to the Roanoke River drainage. Final Report to the U.S. Army Corps of Engineers, Wilmington, NC.
- Jenkins, R.E. and N.M. Burkhead. 1994. Freshwater Fishes of Virginia. American Fisheries Society, Bethesda, MD.
- Lahey, A.M. and P.L. Angermeier. 2007. Range-wide assessment of habitat suitability for Roanoke logperch (*Percina rex*). Final Contract Report VTRC 07-CR8. Virginia Transportation Research Council, Charlottesville, VA.
- North Carolina Department of Transportation (NCDOT). 2003. Best management practices for construction and maintenance activities. Raleigh, NC. Available online at <u>https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/Best%20Management%20Practices%20for%20Construction%20and%20Maintenance%20Activities.pdf</u>. Accessed on May 24, 2022.
- North Carolina Department of Transportation (NCDOT). 2014. Stormwater best management practices toolbox, version 2. Raleigh, NC. Available online at <u>https://connect.ncdot.gov/resources/hydro/Stormwater%20Resources/NCDOT_BMP_T</u> <u>oolbox_2014_April.pdf</u>. Accessed on May 24, 2022.
- North Carolina Department of Transportation (NCDOT). 2015. Erosion and Sediment Control Design and Construction Manual. Raleigh, NC. Available online at <u>https://connect.ncdot.gov/resources/hydro/HSPDocuments/NCDOT_ESC_Manual_2015.</u> <u>pdf</u>. Accessed on May 24, 2022.
- Roberts, J.H. and A.E. Rosenberger. 2008. Threatened fishes of the world: *Percina rex* (Jordan and Evermann 1889) (Percidae). Environmental Biology of Fish 83:439-440.

- Roberts, J.H., P.L. Angermeier, and G.B. Anderson. 2016. Population Viability Analysis for Endangered Roanoke Logperch. Journal of Fish and Wildlife Management 7(1): 46-64.
- Rosenberger, A.E. and P.L. Angermeier. 2003. Ontogenetic shifts in habitat use by the endangered Roanoke logperch (*Percina rex*). Freshwater Biology 48:1563-1577.
- Rosenberger, A.E. 2007. An Update to the Roanoke Logperch Recovery Plan. Prepared for USFWS Virginia Field Office, Gloucester, VA.
- USFWS. 2022. Species Status Assessment Report for the Roanoke Logperch (*Percina rex*), Version 1.0. March 2022, Gloucester, VA.
- Wheeler, A.P., P.L. Angermeier, and A.E. Rosenberger. 2005. Impacts of new highways and subsequent landscape urbanization on stream habitat and biota. Reviews in Fisheries Science 13:141-164.

Archaeology

16-01-0115



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

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



PROJECT INFORMATION

Project No:	B-5721		Count	<i>v:</i>	Rocki	ingham		
WBS No:	45677.1.1		Docun	nent:	Ce			
<i>F.A. No:</i>	BRZ-2177(001)		Fundii	ng:	🗌 Sta	ate	X F	ederal
Federal Permit Requ	uired?	🛛 Yes	🗌 No	Permit T	ype:	usace		

Project Description: NCDOT proposes to replace Bridge No. 124 on SR 2177 (Dan Valley Road) over the Mayo River in Rockingham County. A new bridge is proposed north of the existing Br. No. 124 with traffic being maintained on the current bridge. The proposed length of the new project is about 1890 feet. Preliminary design plans were available at the time of the review and establishes a width of about 150 feet skewed to the north though some new work will be required on the south side near each endpoint. For purposes of this review, the archaeological Area of Potential Effects (APE) is 1890 feet in length with a width of 150 feet which will include all new ROW, cut and fill lines, and also any necessary easements. This is a federally funded undertaking that will also require USACE permitting, therefore Section 106 of the National Historic Preservation Act applies for archaeological review.

REVISION, August 2021: The APE is revised to reflect the current Study Area limits. Effectively, this shortens the west end 300 feet and lengthens the north end 75 feet, approximately (about 1700 feet in length). The width is buffered to about 175 feet. The revision to coverage is very similar to the previous APE and considers essentially the same potential soil disturbances. Figure 2 has been updated to reflect the current APE which is based directly on the updated Study Area. All other aspects of the review remain the same and conclude that no archaeological survey is required.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

The bridge to be replaced is in a rural setting. USGS mapping (Mayodan) and aerial photography was studied (see Figures 1 and 2). Google streetview tool was available at this location and used, though Bing lacked the data here. The existing bridge crosses the Mayo River, here a notable flow of water. The Dan River is present about 1000 feet to the south were the two rivers meet. To the north about 100 feet of the current bridge is an older bridge crossing with abutments still present. These can be seen clearly in the virtual driveby and the abandoned approaching road is quite visible in aerial photography. The surroundings are open grassy fields or woods.

According to USGS mapping and GIS resources (data layer created by NCDOT archaeologist Paul J. Mohler), no cemetery is present at the APE or immediately nearby. Historic maps were examined which show that the new bridge was built in the 1960s. The Rockingham County Highway Map from 1938 (MC.084.1938n) shows a crossing at or very near the APE, but no structures or other notations were depicted near the bridge crossing.

The Office of State Archaeology was visited to review archaeological mapping and to reference any known archaeological surveys and sites. This helps establish an archaeological context for comparison. An archaeological survey was conducted of the Mayo River here, focusing on the west bank. While no sites were documented within the APE, site 31Rk3 is mapped north of the project area about three hundred feet north of the old bridge and roadbed, outside of the APE. The site is unassesed but is unlikely to be

16-01-0115

encountered during the proposed construction. Another documented site is the above ground remains of the "Mayo River Sluice," 31Rk59, recorded during the Dan River Navigation System and is listed on the National Register of Historic Places. This resource is located about 1700 feet south and, outside of the APE, will not be affected by the project. Another more recent NCDOT survey (PA 16-01-0087) found no archaeological sites on a bridge replacement over the Dan River further west a few miles on the other side of Madison.

A large portion of the APE has been modified by the construction of the existing SR 2177 and Bridge No. 124, and prior to that impacts from the older roadway now since abandoned. The older roadbed is encountered at the southern limits, but also at the north banks of the river for three hundred feet or so.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The bridge replacement will be constructed on just north of the existing facility, and immediately south of an earlier bridge here. Much of the APE has already been modified by the construction associated with the previous two bridges and roads, a generally disturbed context which is not favorable for preservation of intact, significant archaeological sites. Previous archaeological reviews and surveys documented no archaeological sites or cemeteries within the APE and nearby resources are not likely to be encountered.

The context doesn't indicate a high probability for archaeological sites within the APE. It is unlikely that significant, intact otherwise unknown archaeological remains would be present and impacted by the bridge replacement project. For archaeological review, this federally permitted undertaking should be considered compliant with Section 106.

SUPPORT DOCUMENTATION

See attached:	Map(s)	Previous Survey Info y of County Survey Notes	Dependent Photos Other:	Correspondence
FINDING BY	NCDOT AR	CHAEOLOGIST		
<u>NO ARCHAEC</u>	<u>OLOGY SURVI</u>	EY REQUIRED		
Burgh	Out			8/2/2021
NCDOT ARC	HAEOLOGIST			Date

NCDOT ARCHAEOLOGIST

Project Tracking No.:

16-01-0115



Figure 1. Vicinity of PA 16-01-0115, the replacement of Br. No. 124 on SR 2177 (Dan Valley Road) in Rockingham County, shown on USGS mapping (Mayodan). The APE is shown in yellow.

"No ARCHAEOLOGY SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement. 3 of 4

Project Tracking No.:

16-01-0115



Figure 2. Aerial map of the proposed replacement of Br. No. 124 on SR 2177 (Dan Valley Road). The revised APE (as of 8/2/2021) is shown in yellow. Note an earlier roadway and crossing is visible north of the bridge, partially overlapping the APE.

"No ARCHAEOLOGY SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement.

Historic Architecture and Landscapes





HISTORIC ARCHICTECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

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

PROJECT INFORMATION

roject No:	B-5721	County:	Rockingham
VBS No.:	45677.1.1	Document Type:	CE
ed. Aid No:	BRZ-2177 (001)	Funding:	State Kederal
ederal ermit(s):	Yes No	Permit Type(s):	NWP
roject Descripti	<u>on</u> :		
<i>roject Descripti</i>	<u>on</u> : Jo. 124 on SR 2177 (N. W.	/ater St) over Mayo	River

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: April 8, 2016

Description of review activities, results, and conclusions:

On February 11, 2016 a search of NC HPOWEB GIS Service map and the Rockingham County Tax GIS data reveal that an identified historic site, Bridge No. 124 (RK1122) in the Area of Potential Effects for this project, as well as two houses built in 1912 and 1922. An Architectural Historian conducted a site visit to determine if further study is required. Both of the houses have evidence of significant alterations; windows and doors replaces, and new exterior siding. The bridge itself, Rockingham County Bridge No. 124, was built in 1965 was identified as a Surveyed Site. The structure does not exemplify any distinctive engineering or aesthetic type and is not eligible for the National Register of Historic Places. Therefore, no historic properties are present in the Area of Potential Effects of this project.

On August 9, 2021 this project was reviewed with an expanded APE. There are three houses in the expanded project area which are over 50 years of age. Two of these houses sit between 350 & 500 feet from the roadway and cannot be see from google street view. According to tax data for Rockingham County both of these are one story brick ranch style houses. Oblique aerial

Historic Architecture and Landscapes NO HISTORIC PROPERTIES PRESENT OR AFFECTED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.

images do not reveal a roof line that would indicate a mid-century modern house which might be individually eligible. Instead, these ranch houses appear to be of common type and are not part of a larger historic district. The three house is visible from google street view. It too is a common one and a half story cottage built in 1954. All three of these properties sit adjacent to the large electric transmission lines which causes a visual intrusion. There are no historic properties that will be impacted by this expanded APE.

SUPPORT DOCUMENTATION

 \boxtimes Map(s)

Previous Survey Info.

Photos

Correspondence

Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes - NO HISTORIC PROPERTIES PRESENT OF AFFECTED

NCDOT Architectural Historian

Date



Expanded APE

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1954 House



1972 and 1967 houses

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Tribal Coordination

From: Kaleigh Pollak <Kaleigh@monacannation.com>
Sent: Wednesday, January 26, 2022 12:10 PM
To: Alford, Kristy <kalford@ncdot.gov>
Cc: Tribal Office <TribalOffice@monacannation.com>
Subject: [External] RE: B-5721 NCDOT Study Letter ATTN: Kaleigh Pollak
Good Afternoon,

Thank you for contacting us regarding the proposed project.

The Monacan Indian Nation is a federally recognized sovereign tribe, headquartered on Bear Mountain in Amherst County. Citizens of the Nation are descended from Virginia and North Carolina Eastern Siouan cultural and linguistic groups, and our ancestral territory includes Virginia west of the fall line of the rivers, sections of southeastern West Virginia, and portions of northern North Carolina. At this time, the active Monacan consultation areas include:

Virginia: Albemarle, Alleghany, Amherst, Appomattox, Augusta, Bath, Bedford, Bland, Buchanan, Buckingham, Campbell, Carroll, Charlotte, Clarke, Craig, Culpepper, Cumberland, Dickenson, Floyd, Fluvanna, Franklin, Frederick, Giles, Goochland, Grayson, Greene, Halifax, Henry, Highland, Lee, Loudoun, Louisa, Madison, Mecklenburg, Montgomery, Nelson, Orange, Page, Patrick, Pittsylvania, Powhatan, Prince Edward, Pulaski, Rappahannock, Roanoke, Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Tazewell, Warren, Washington, Wise, and Wythe Counties, and all contiguous cities.

West Virginia: Greenbrier, Mercer, Monroe, Pendleton, Pocahontas, and Summers Counties.

North Carolina: Alamance, Caswell, Granville, Orange, Person, Rockingham, Vance, and Warren Counties.

At this time, the Nation does not wish to actively participate in this consultation project, because:

	This project is outside our ancestral territory
Х	The project's impacts are anticipated to be minimal
	The project is more closely related to, which should be contacted to participate in consultation
	The tribal office does not currently have the capacity to participate in this project
	Other:

However, the Nation requests to be contacted if:

- Sites associated with native history may be impacted by this project;
- Adverse effects associated with this project are identified;
- Human remains are encountered during this project;
- Unanticipated native cultural remains are encountered during this project;
- Other tribes consulting on this project cease consultation; or
- The project size or scope becomes larger or more potentially destructive than currently described.

Please do not make any assumptions about future consultation interests based on this decision, as priorities and information may change. We request that you send any future consultation communications in electronic form to <u>Consultation@MonacanNation.com</u>. We appreciate your outreach to the Monacan Indian Nation and look forward to working with you in the future.

Thank you,

Kaleigh Pollak **Program Manager** Monacan Indian Nation O: (434) 363-4864 C: (434) 473-1029 111 Highview Drive Madison Heights, VA 24572



From: Tribal Office <<u>TribalOffice@monacannation.com</u>> Sent: Monday, December 13, 2021 11:48 AM To: Kaleigh Pollak <<u>Kaleigh@monacannation.com</u>> Subject: FW: B-5721 NCDOT Study Letter ATTN: Kaleigh Pollak

From: Alford, Kristy <<u>kalford@ncdot.gov</u>>
Sent: Monday, December 13, 2021 11:47 AM
To: Tribal Office <<u>TribalOffice@monacannation.com</u>>
Cc: Morales, Suzette (FHWA) <<u>omojojadavwe.morales@dot.gov</u>>; Wilkerson, Matt T
<<u>mtwilkerson@ncdot.gov</u>>; celia.miars <<u>celia.miars@aecom.com</u>>
Subject: B-5721 NCDOT Study Letter ATTN: Kaleigh Pollak

Ms. Pollak,

Please find attached our official coordination letter and study area for the B-5721 project. Please let me know if you have any questions or comments.

Kristy L. W. Alford, P.E., CPM

Engineering Supervisor III Field Operations – Eastern Region Structures Management Unit Department of Transportation

919 707 6531 office 919 426 4377 mobile kalford@ncdot.gov

1000 Birch Ridge Drive Raleigh, NC 27610



No Response was received

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROY COOPER

J. ERIC BOYETTE Secretary

December 13, 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 (NCDOT) is proposing to replace bridge 780124, carrying SR 2177 (Dan Valley Road) over the Mayo River in Rockingham County (Figure 1). The project proposes to construct a new bridge to the north of the existing bridge. The Federal Highway Administration (FHWA) 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. The coordinates of this project are approximately 36.392356, -79.952717.

We would appreciate any information you might have that would be helpful in evaluation potential environmental impacts of the project. Your comments may be added to the NEPA Environmental Document.

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 January 7th, 2022 so that your comments can be used in the engineering studies of this project. If you have any questions concerning this project, or would like any additional information, please contact me at <u>kalford@ncdot.gov</u> or (919) 707-6531.

Thank you,

DocuSigned by: Kusty R. W. alford

Kristys Afford, P.E., CPM Structures Management Unit, NCDOT

Cc: Matt Wilkerson, NCDOT Archaeology Team Leader Suzette Morales, PE, FHWA

Telephone: (919) 707-6000 Customer Service: 1-877-368-4968 *Location:* CENTURY CENTER, BUILDING A 1000 BIRCH RIDGE DRIVE RALEIGH, NC 27610

Website: www.ncdot.gov



16-01-0115



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

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PROJECT INFORMATION

Project No:	B-5721		Count	<i>v:</i>	Rocki	ingham		
WBS No:	45677.1.1		Docun	nent:	Ce			
<i>F.A. No:</i>	BRZ-2177(001)		Fundii	ng:	🗌 Sta	ate	X F	ederal
Federal Permit Requ	uired?	🛛 Yes	🗌 No	Permit T	ype:	usace		

Project Description: NCDOT proposes to replace Bridge No. 124 on SR 2177 (Dan Valley Road) over the Mayo River in Rockingham County. A new bridge is proposed north of the existing Br. No. 124 with traffic being maintained on the current bridge. The proposed length of the new project is about 1890 feet. Preliminary design plans were available at the time of the review and establishes a width of about 150 feet skewed to the north though some new work will be required on the south side near each endpoint. For purposes of this review, the archaeological Area of Potential Effects (APE) is 1890 feet in length with a width of 150 feet which will include all new ROW, cut and fill lines, and also any necessary easements. This is a federally funded undertaking that will also require USACE permitting, therefore Section 106 of the National Historic Preservation Act applies for archaeological review.

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16-01-0115

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SUPPORT DOCUMENTATION

See attached:	Map(s)	Previous Survey Info y of County Survey Notes	Dependent Photos Other:	Correspondence
FINDING BY	NCDOT AR	CHAEOLOGIST		
<u>NO ARCHAEC</u>	<u>OLOGY SURVI</u>	EY REQUIRED		
Burgh	Out			8/2/2021
NCDOT ARC	HAEOLOGIST			Date

NCDOT ARCHAEOLOGIST

Project Tracking No.:

16-01-0115



Figure 1. Vicinity of PA 16-01-0115, the replacement of Br. No. 124 on SR 2177 (Dan Valley Road) in Rockingham County, shown on USGS mapping (Mayodan). The APE is shown in yellow.

"No ARCHAEOLOGY SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement. 3 of 4

Project Tracking No.:

16-01-0115



Figure 2. Aerial map of the proposed replacement of Br. No. 124 on SR 2177 (Dan Valley Road). The revised APE (as of 8/2/2021) is shown in yellow. Note an earlier roadway and crossing is visible north of the bridge, partially overlapping the APE.

"No ARCHAEOLOGY SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement.

NEPA/SEPA Document

Type I and II Ground Disturbing Categorical Exclusion Action Classification Form

STIP Project No.	B-5721
WBS Element	45677.1.1
Federal Project No.	BRZ-2177(001)

A. Project Description:

The North Carolina Department of Transportation (NCDOT) is proposing to replace bridge 780124, carrying SR 2177 (Dan Valley Road) over the Mayo River in Rockingham County (Figure 1). A new bridge will be constructed to the north of the existing bridge, and traffic will be maintained on the existing bridge during construction. Following construction of the new bridge, the existing bridge would be removed. The proposed action is listed in the State Transportation Improvement Program (STIP) as B-5721.

Bridge number 780124 is located in Rockingham County, just outside of the Madison town limits. The land within the immediate vicinity of the project study area is largely undeveloped. However, the Town of Madison, the Town of Mayodan, and Mayo River State Park are located adjacent to the project study area. One business is located south of the project along Dan Valley Road, and a number of single family homes are located to the east of the existing bridge.

The existing bridge includes two 10-foot travel lanes without shoulders. The bridge is approximately 235 feet long with seven spans. It is at a 15 degree skew to the river. The proposed replacement bridge would be constructed as a curved bridge, 257 feet in length, and approximately 20-30 feet north of the existing bridge. Project construction will extend approximately 900 feet to the southwest and 750 feet to the northeast from the replacement bridge along Dan Valley Road.

B. Description of Need and Purpose:

The purpose of the proposed project is to replace a deficient bridge. Bridge No. 124 is considered structurally deficient with a sufficiency rating of 13.54 out of 100. Being structurally deficient does not mean that the bridge is unsafe, but does mean the bridge is in need of repair or replacement. As a bridge ages, the cost of repairs and continued maintenance eventually necessitate the need for replacement. The current bridge was constructed in 1965 and is reaching the end of its useful life. The bridge also has a posted weight limit of 26 tons for single vehicles and 35 tons for tractor trailers.

C. Categorical Exclusion Action Classification:



D. Proposed Improvements

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:

Dan Valley Road is a two-lane undivided roadway that provides connectivity between the Town of

Madison and areas to the northeast, which include commercial and industrial development and McMichael High School. The posted speed limit is 45 mph.

Costs

Construction Cost	\$3,550,000
Right of Way Cost	\$227,000
Utility Cost	<u>\$268,602</u>
Total Cost	\$4,045,602

Traffic

Current (2016):	3,700 vpd
Future (2040):	6,000 vpd

Alternatives Discussion

<u>No Build</u>

There would be no changes to the existing bridge, which would not address the need to replace the deficient bridge.

Build Alternative 1 (Selected)

Alternative 1 would replace the bridge with a curved bridge approximately 20-30 feet north of the existing bridge. The replacement bridge would be 257 feet long. The bridge would have two 12-foot lanes, a 3-foot shoulder on the north side, and a 6-foot shoulder on the south side. Project construction would extend approximately 900 feet to the southwest and 750 feet to the northeast from the replacement bridge along Dan Valley Road. Traffic would be maintained on the existing bridge structure during construction.

Alternative 1 was selected as the preferred alternative because it includes a more desirable roadway alignment. This alternative has lower impacts to properties and lower costs than other alternatives evaluated. Alternative 1 is shown on Figure 2.

Build Alternative 2

Alternative 2 would replace the bridge with a parallel bridge approximately 10 feet north of the existing bridge. The replacement bridge would be 253 feet long. The bridge would have two 12-foot lanes and 3-foot shoulders. Project construction would extend approximately 1050 feet to the southwest and 650 feet to the northeast from the replacement bridge along Dan Valley Road. Traffic would be maintained on the existing bridge structure during construction.

Build Alternative 3

Alternative 3 would replace the bridge with a parallel bridge approximately 10 feet north of the existing bridge. The replacement bridge would be 256 feet long. The bridge would have two 12-foot lanes and 3-foot shoulders. Project construction would extend approximately 850 feet to the southwest and 1000 feet to the northeast from the replacement bridge along Dan Valley Road. This alternative would require the relocation of one residence. Traffic would be maintained on the existing bridge structure during construction.

Pedestrian and Bicycle Accommodations

The existing bridge does not include pedestrian or bicycle accommodations, and no additional accommodations are proposed with this project. However, the NCDOT Bicycle and Pedestrian Division recommends that the NCDOT coordinate with local governments regarding opportunities to provide a graded shelf underneath the bridge on the west side to accommodate future greenway construction.

The following plans recommend a greenway along the west side of the Mayo River: *Madison Rivers & Trails Plan* (2018), *Mayo River Recreation Action Plan Phase I* (2016), *Rockingham County Pathways* (2013), and *Rockingham County Comprehensive Transportation Plan* (2010).

Jurisdictional Resources

The only jurisdictional resource within the project study area is the Mayo River. There are no wetlands located within the project study area. Minor impacts from the selected alternative to the Mayo River may occur due to the placement and/or removal of bridge bents. It is anticipated that a US Army Corps of Engineers (USACE) Nationwide Permit 14 would be applicable for stream impacts, if any. The USACE holds the final discretion as to what permit may be required to authorize project construction. A Section 401 General Water Quality Certification will be needed if a Section 404 permit is required.

Protected Species

The following species are listed for Rockingham County: Roanoke logperch (*Percina rex*), James spinymussel (*Pleurobema collina*), and smooth coneflower (*Echinacea laevigata*). The green floater (*Lasmigona subviridis*) is being evaluated by US Fish and Wildlife Service for listing under the Endangered Species Act and is known to occur in Rockingham County. Field surveys for smooth coneflower were conducted in 2016, and no individuals were observed in the study area and there are no known occurrences within 1 mile of the study area. Surveys for the aquatic species were conducted in 2018, and no individuals were identified in the study area. However, a review of NC Natural Heritage Program (NC NHP) records indicated occurrences of all three species within a 5-mile buffer of the study area, including a known occurrence of Roanoke logperch within the project study area. Biological conclusions of "May Affect, Likely to Adversely Affect" have been recommended for the Roanoke logperch, as well as for green floater (if it becomes listed). The USFWS will be contacted once final designs are prepared to request concurrence on these biological conclusions. A biological conclusion of "May Affect, Not Likely to Adversely Affect" has been recommended for James spinymussel.

In addition, the US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities.

Cultural Resources

NCDOT Cultural Resources staff determined that there are three potential historic sites located within the project area of potential effects, including bridge number 780124 itself, as well as two houses built in 1912 and 1922. An architectural historian conducted a site visit and noted significant alterations to the houses. The bridge does not exemplify any distinctive engineering or aesthetic type and is not eligible for the National Register of Historic Places. Therefore, no historic properties are present in the area of potential effects.

NCDOT Cultural Resources staff determined that there are no previously recorded archaeological sites or cemeteries within the project area of potential effects (APE). The bridge replacement will be constructed just north of the existing facility, and immediately south of an earlier bridge here. Much of the APE has already been modified by the construction associated with the previous two bridges and roads. It is unlikely that significant, intact otherwise unknown archaeological remains would be present and impacted by the bridge replacement project, and NCDOT Cultural Resources staff have determined that no survey for archaeological resources is required. For archaeological review, this federally permitted undertaking should be considered compliant with Section 106.

Resource Agency Input

NCDOT sought input from resource and regulatory agencies via a start of study scoping letter distributed in September 2018. Letters were sent to the following agencies. Agencies that responded with comments are marked with an asterisk (*). Agency comments are included in Attachment A.

- US Army Corps of Engineers (USACE)
- US Fish and Wildlife Service (USFWS)*
- US Department of Transportation (US DOT)
- US Environmental Protection Agency (USEPA)
- NC Division of Parks and Recreation
- NC Wildlife Resources Commission (NCWRC)*
- NC Division of Water Resources (NCDWR)
- NCDOT Bicycle and Pedestrian Division*
- NCDOT Highway Division 7*

Public Involvement

Postcards will be distributed to property owners in the vicinity of the projects to update them on the project status, preferred alternative, and project schedule.

Impact Summary

Impacts summarized below were estimated using functional design slope stake limits plus a 40-foot buffer and/or functional design right of way limits.

Length:	1,890 feet
Streams:	0 feet
Wetlands:	0 feet
100-year floodplain:	6.8 acres
Floodway:	3.8 acres
Farmland soils:	1.3 acres
Active agriculture (ac)	0 acres
Parcels:	7
Relocations:	0

F. Project Impact Criteria Checklists:

Type I & II - Ground Disturbing Actions FHWA APPROVAL ACTIVITIES THRESHOLD CRITERIA If any of questions 1-7 are marked "yes" then the CE will require FHWA approval. Yes No Does the project require formal consultation with U.S. Fish and Wildlife Service 1 \times (USFWS) or National Marine Fisheries Service (NMFS)? Does the project result in impacts subject to the conditions of the Bald and Golden 2 \times Eagle Protection Act (BGPA)? Does the project generate substantial controversy or public opposition, for any 3 \mathbf{X} reason, following appropriate public involvement? Does the project cause disproportionately high and adverse impacts relative to low-4 \times income and/or minority populations? Does the project involve a residential or commercial displacement, or a substantial 5 \mathbf{X} amount of right of way acquisition? 6 Does the project require an Individual Section 4(f) approval? \times Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic 7 \mathbf{X} Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)? If any of questions 8 through 31 are marked "yes" then additional information will be required for those questions in Section G. **Other Considerations** Yes No Does the project result in a finding of "may affect not likely to adversely affect" for 8 listed species, or designated critical habitat under Section 7 of the Endangered \times Species Act (ESA)? \times 9 Is the project located in anadromous fish spawning waters? Does the project impact waters classified as Outstanding Resource Water (ORW), 10 High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed \boxtimes impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)? Does the project impact waters of the United States in any of the designated \times 11 mountain trout streams? \times Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 12 404 Permit? Will the project require an easement from a Federal Energy Regulatory Commission \mathbf{X} 13 (FERC) licensed facility? Does the project include a Section 106 of the NHPA effects determination other than

14

a no effect, including archaeological remains?

 \times

Other Co	nsiderations (continued)	Yes	No
15	Does the project involve hazardous materials and/or landfills?		\boxtimes
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	\boxtimes	
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?		\boxtimes
18	Does the project require a U.S. Coast Guard (USCG) permit?		\boxtimes
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?		\boxtimes
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?		\boxtimes
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?		\boxtimes
22	Does the project involve any changes in access control?		\boxtimes
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?		\boxtimes
24	Will maintenance of traffic cause substantial disruption?		X
25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?		\boxtimes
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?		X
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?		\boxtimes
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?		\boxtimes
29	Is the project considered a Type I under the NCDOT's Noise Policy?		\boxtimes
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	\boxtimes	
31	Are there other issues that arose during the project development process that affected the project decision?		\boxtimes

G. Additional Documentation as Required from Section F

Question 1 – Formal Consultation with the USFWS

It has not yet been determined whether formal consultation with the USFWS will be required. The USFWS will be contacted once final designs are prepared, and if necessary consultation will be initiated to address impacts to Roanoke logperch and Green floater.

Question 8 – Protected Species

A Natural Resources Technical Report (NRTR) for this project, including surveys for protected plant species, was completed in 2016, and surveys for protected aquatic species were conducted in 2018. No individuals were identified during surveys for protected species within the project study area, but based on habitat and proximity to known NC Natural Heritage Program (NHP) occurrences, the following biological conclusions were made:

Species	Status	Biological Conclusion
Roanoke logperch	Endangered	May Affect, Likely to Adversely Affect
Green floater	At Risk Species	May Affect, Likely to Adversely Affect
James spinymussel	Endangered	May Affect, Not Likely to Adversely
		Affect
Smooth coneflower	Endangered	No Effect

The USFWS will be contacted once final designs are underway to request concurrence on these biological conclusions.

Although not individually listed for Rockingham County, the USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) in eastern North Carolina. The programmatic determination for NLEB for the NCDOT program in Divisions 1 through 8 is "May Affect, Likely to Adversely Affect". The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Rockingham County, where B-5721 is located. This level of incidental take is authorized from the effective date of final listing through April 30, 2020.

Question 16 – Floodplains

The project will require grading and construction within the 100-year floodplain and regulatory floodway associated with the Mayo River.

Question 30 – Farmland Soils

A preliminary screening of farmland conversion impacts in the project area has been completed (NRCS Form AD-1006, Part VI only) and a total score of 37 out of 160 points was calculated for the project site (CIA, 2019). Since the total site assessment score does not exceed the 60-point threshold established by NRCS, farmland conversion impacts may be anticipated, but are not considered notable. Based on functional design slope stake limits plus a 40-foot buffer, it is estimated that the project would impact 1.3 acres of farmland soils.

H. <u>Project Commitments</u>

Rockingham County Replace Bridge 780124 over Mayo River in Madison Federal Project No. BRZ-2177(001) WBS No. 45677.1.1 TIP No. B-5721

NCDOT Division 7 Construction – Northern long-eared Bat

The USFWS has developed a programmatic biological opinion (PBO) in conjunction with Federal Highway Administration (FHWA), the USACE and NCDOT for the northern long-eared bat (NLEB) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect". The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Rockingham County, where B-5721 is located. This level of incidental take is authorized from the effective date of final listing through April 30, 2020.

After project completion, the contract administrator for construction must submit the actual amount of tree clearing reported in tenths of acres. This information should be submitted to the NCDOT Biological Surveys group.

NCDOT EAU – Threatened and Endangered Species

The USFWS will be contacted once final designs are prepared to request concurrence on the biological conclusions for Roanoke logperch, as well as for green floater (if it becomes listed).

NCDOT Division 7 Construction– Erosion and Sediment Control

Due to the proximity of the project to the Mayo River, NCDOT will follow *Design Standards in Sensitive Watersheds* guidelines for implementing erosion and sediment control BMPs for this project.

NCDOT Hydraulics Unit – FEMA

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

NCDOT Division 7 Construction – FEMA

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

I. <u>Categorical Exclusion Approval</u>

STIP Project No	. B-5721
WBS Element	45677.1.1
Federal Project	No. BRZ-2177(001)
Prepared By: 4/8/2019 Date	Christina Shumate, AICP AECOM
Prepared For:	North Carolina Department of Transportation, Structures Management Unit
Reviewed By: 4/8/2019	John Jamison, PWS
Date	John Jamison, PWS North Carolina Department of Transportation, Environmental Policy Unit ed If all of the threshold questions (1 through 7) of Section F are answered "no," NCDOT approves this Categorical Exclusion.
Certifie	If any of the threshold questions (1 through 7) of Section F are answered "yes," NCDOT certifies this Categorical Exclusion.
4/12/2019 Date	DocuSigned by: Kevin Fischer EDTRATADOSECAND Kevin Fisher, P.E. North Carolina Department of Transportation, Structures Management Unit
FHWA Approved:	For Projects Certified by NCDOT (above), FHWA signature required.
Date	John F. Sullivan, III, PE, Division Administrator Federal Highway Administration

Figures

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B-5721 Bridge Replacement at SR 2177 over Mayo River Rockingham County



Figure 1 Vicinity Map February 2019





This map is for reference only. Sources: Data was received by NC Department of Transportation, ESRI, NCOnemap






Attachment A Agency Correspondence

Agency Comments on Start of Study Letter

NCDOT Highway Division 7 (September 19, 2018)

Needs T&E study for the Roanoke logperch. This project may require a Section 7 review.

No bents in the water.

I recommend using the existing bridge as the onsite detour and building the new structure to the north.

Remove any existing footing that are in the water for the safety of canoes and kayaks.

North Carolina Division of Parks and Recreation (September 24, 2018)

Based on the projects as proposed, the NC Division of Parks and Recreation has no objections and therefore no comments.

North Carolina Wildlife Resources Commission (September 25, 2018)

The potential exist for Roanoke logperch (*Percina rex*: state E, federal E) to be found at this site. NCDOT should coordinate with NCWRC and USFWS in conducting a survey to determine the presence or absence of this species. We recommend replacing this bridge with a bridge. Standard recommendations apply.

US Fish and Wildlife Service (September 26, 2018)

Due to the known occurrence of the federally endangered Roanoke Logperch (*Percina rex*) in the vicinity of B-5721, a formal Section 7 consultation may be required for B-5721 for that species. A fish survey should be conducted at the project site. Also, although not previously found in the vicinity of this project, the federally endangered James River Spinymussel (*Parvaspina collina*) is known to occur upstream in the Mayo River. If appropriate habitat occurs within the project vicinity, a mussel survey should also be conducted.

NCDOT Bicycle and Pedestrian Division (October 18, 2018)

NCDOT should coordinate with local governments regarding opportunities to provide a graded shelf underneath the bridge to accommodate future greenway construction.

Attachment B Cultural Resources No Survey Required Forms

16-01-0115



HISTORIC ARCHICTECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

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

PROJECT INFORMATION

Project No:	B-5721	County:	Rockingham
WBS No.:	45677.1.1	Document Type:	CE
Fed. Aid No:	BRZ-2177 (001)	Funding:	State Federal
Federal Permit(s):	Yes No	Permit Type(s):	NWP
Project Descript	tion:		

Replace Bridge No. 124 on SR 2177 (N. Water St) over Mayo River.

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

- \boxtimes There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- \boxtimes There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- \square There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or \mathbf{X} documents as needed.)

Date of field visit: April 8, 2016

Description of review activities, results, and conclusions:

On February 11, 2016 a search of NC HPOWEB GIS Service map and the Rockingham County Tax GIS data reveal that an identified historic site, Bridge No. 124 (RK1122) in the Area of Potential Effects for this project, as well as two houses built in 1912 and 1922. An Architectural Historian conducted a site visit to determine if further study is required. Both of the houses have evidence of significant alterations; windows and doors replaces, and new exterior siding. The bridge itself, Rockingham County Bridge No. 124, was built in 1965 was identified as a Surveyed Site. The structure does not exemplify any distinctive engineering or aesthetic type and is not eligible for the National Register of Historic Places. Therefore, no historic properties are present in the Area of Potential Effects of this project.

SUPPORT DOCUMENTATION

Map(s)

Previous Survey Info.

Photos

Correspondence Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes - NO HISTORIC PROPERTIES PRESENT OF AFFECTED

lay A pnl 11, 2016

NCDOT Architectural Historian

Date





NO ARCHAEOLOGICAL SURVEY REQUIRED FORM This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No:	B-5721		County	<i>:</i> :	Rock	kingham	
WBS No:	45677.1.1		Docum	ient:	Ce		
<i>F.A. No:</i>	BRZ-2177(001)		Fundir	ıg:		tate	🛛 Federal
Federal Permit Requ	iired?	🛛 Yes	🗌 No	Permit T	ype:	usace	

Project Description: NCDOT proposes to replace Bridge No. 124 on SR 2177 (Dan Valley Road) over the Mayo River in Rockingham County. A new bridge is proposed north of the existing Br. No. 124 with traffic being maintained on the current bridge. The proposed length of the new project is about 1890 feet. Preliminary design plans were available at the time of the review and establishes a width of about 150 feet skewed to the north though some new work will be required on the south side near each endpoint. For purposes of this review, the archaeological Area of Potential Effects (APE) is 1890 feet in length with a width of 150 feet which will include all new ROW, cut and fill lines, and also any necessary easements. This is a federally funded undertaking that will also require USACE permitting, therefore Section 106 of the National Historic Preservation Act applies for archaeological review.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

The bridge to be replaced is in a rural setting. USGS mapping (Mayodan) and aerial photography was studied (see Figures 1 and 2). Google streetview tool was available at this location and used, though Bing lacked the data here. The existing bridge crosses the Mayo River, here a notable flow of water. The Dan River is present about 1000 feet to the south were the two rivers meet. To the north about 100 feet of the current bridge is an older bridge crossing with abutments still present. These can be seen clearly in the virtual driveby and the abandoned approaching road is quite visible in aerial photography. The surroundings are open grassy fields or woods.

According to USGS mapping and GIS resources (data layer created by NCDOT archaeologist Paul J. Mohler), no cemetery is present at the APE or immediately nearby. Historic maps were examined which show that the new bridge was built in the 1960s. The Rockingham County Highway Map from 1938 (MC.084.1938n) shows a crossing at or very near the APE, but no structures or other notations were depicted near the bridge crossing.

The Office of State Archaeology was visited to review archaeological mapping and to reference any known archaeological surveys and sites. This helps establish an archaeological context for comparison. An archaeological survey was conducted of the Mayo River here, focusing on the west bank. While no sites were documented within the APE, site 31Rk3 is mapped north of the project area about three hundred feet north of the old bridge and roadbed, outside of the APE. The site is unassesed but is unlikely to be encountered during the proposed construction. Another documented site is the above ground remains of the "Mayo River Sluice," 31Rk59, recorded during the Dan River Navigation System and is listed on the National Register of Historic Places. This resource is located about 1700 feet south and, outside of the APE, will not be affected by the project. Another more recent NCDOT survey (PA 16-01-0087) found no archaeological sites on a bridge replacement over the Dan River further west a few miles on the other side of Madison.



A large portion of the APE has been modified by the construction of the existing SR 2177 and Bridge No. 124, and prior to that impacts from the older roadway now since abandoned. The older roadbed is encountered at the southern limits, but also at the north banks of the river for three hundred feet or so.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The bridge replacement will be constructed on just north of the existing facility, and immediately south of an earlier bridge here. Much of the APE has already been modified by the construction associated with the previous two bridges and roads, a generally disturbed context which is not favorable for preservation of intact, significant archaeological sites. Previous archaeological reviews and surveys documented no archaeological sites or cemeteries within the APE and nearby resources are not likely to be encountered.

The context doesn't indicate a high probability for archaeological sites within the APE. It is unlikely that significant, intact otherwise unknown archaeological remains would be present and impacted by the bridge replacement project. For archaeological review, this federally permitted undertaking should be considered compliant with Section 106.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photocopy of County Survey Notes FINDING BY NCDOT ARCHAEOLOGIST	Dependence Photos Other:	Correspondence	
<u>NO ARCHAEOLOGY SURVEY REQUIRED</u>			
Burg Out		2/13/2019	
NCDOT ARCHAEOLOGIST		Date	