Type I or II Categorical Exclusion Action Classification Form

TIP Project No.	BR-0109
WBS Element	49217.1.1
Federal Project No.	N/A

A. Project Description:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 80 on Abraham Road (S.R. 1512) over unnamed tributary to North Deep Creek in Yadkin County. The bridge will be replaced on the existing alignment while detouring traffic offsite during construction. (See attached figures.)

Bridge No. 80 was built in 1960. The existing structure is 26 feet long with a deck width of 20.167 feet. The structure is a timber deck on I-Beams with timber substructure. NCDOT proposes to construct a single span structure with a deck width of 30 feet. The new structure will be 60 feet long and include 10-foot lanes, and shoulders averaging 3-feet, 11-inches. The length of the overall improvement project is 340 feet. The project is scheduled for Right of Way (ROW) in January 2020 and Let in July 2020.

B. <u>Description of Need and Purpose:</u>

The purpose of the proposed project is to replace a functionally obsolete bridge. NCDOT Structure Management Unit (SMU) records indicate Bridge No. 80 has a sufficiency rating of 55.46 out of a possible 100 for a new structure. The bridge is considered functionally obsolete because it is narrow and has insufficient load-carrying capacity with a deck geometry rating of 2 out of 9.

The replacement of Bridge No. 80 is part of the *Growing Rural Economy and Agriculture through Transportation and Technology Enhancement or Replacement in North Carolina (GREATTER-NC)*Project under the United States Department of Transportation's 2018 Better Utilizing Investments to Leverage Development (BUILD) Grant program. The purpose of the grant and this bridge replacement project is to provide transportation infrastructure to support economic development and improve physical and digital connectivity in rural communities in North Carolina. The posted weight restriction (17 tons for single vehicle and 23 tons for a truck/tractor/semitrailer) on Bridge No. 80 prohibits large or heavy vehicles, typically used in transporting agricultural and manufactured products, from using the bridge. Vehicles above the posted weight must detour 5.5 miles to avoid the bridge. Replacing the existing bridge will eliminate posted weight limits by providing a safe crossing for all legal loads and will make accommodations for broadband installation in order to support economic competitiveness.

C. Categorical Exclusion Action Classification:

Type I(A) - No Ground Disturbance or Limited Disturbance within the Operationa ROW

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).

NOTE: The following Type I(C) Actions (NCDOT-FHWA 2019 CE Agreement, Appendix A) only require completion of Sections A through D to substantiate and document the CE classification: 1, 5, 8 (signs and pavement markings only), 11, 13, 14, 15, 16, 17, 19, and 20; or several other Type I Action subcategories identified in past NCDOT-FHWA CE Programmatic Agreements (see Appendix D). Pre-approval as a CE does not exempt activities from compliance with other federal environmental laws.

E. Special Project Information:

Offsite Detour:

The proposed 5.5-mile detour for this project follows Round Hill Road (S.R. 1511), Vallie Road (S.R. 1505), Country Club Road (S.R. 1503), U.S. 601, and Reece Road (S.R. 1513) as shown on the Detour Map.

The proposed offsite detour will not impact Emergency Services or School Bus Routes. Yadkin County Emergency Services (EMS) did not identify any concerns for EMS services related to this proposed project. Yadkin County Schools staff stated that no school bus routes use Abraham Road.

NCDOT should coordinate with Yadkin County Emergency Services (Mr. Keith Vestal, 336.849.7622) at least one month prior to construction. This is noted in the green sheet / project commitments.

Cost:

The estimated costs of the proposed project are as follows:

Right of Way: \$ 12,000 Utilities: \$ 12,000 Construction: \$ 900,000 Total: \$ 924,000

Design:

Design Standards: Sub-regional Tier
Design Speed: 55 miles per hour (mph)

Design Exceptions: SAG Vertical Curve K and nighttime vertical SSD.

Construction Type: Replace in-place

Estimated Traffic:

Average Daily Traffic 2015: 440 vehicles per day Average Daily Traffic 2040: 880 vehicles per day

Alternatives Discussion:

<u>No Build</u> – The no build alternative would result in eventually closing the road, which is unacceptable given the volume of traffic served by Abraham Road (S.R. 1512).

<u>Rehabilitation</u> – The bridge was originally constructed in 1960. The timber materials within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components, which would constitute effectively replacing the bridge.

Replace In-Place with Onsite Detour – An onsite detour was not evaluated due to the presence of an acceptable offsite detour. A temporary onsite detour would unnecessarily increase temporary project impacts to the unnamed tributary to North Deep Creek.

<u>Replace In-Place using Staged Construction</u> – Staged construction was not considered because of the availability of an acceptable offsite detour.

Replace on New Alignment – Given that the alignment for Abraham Road is acceptable, and a new alignment would unnecessarily increase project impacts (especially to the unnamed tributary to North Deep Creek), replacing the bridge on new alignment was not considered as an alternative.

Replace In-Place with Offsite Detour (Preferred) – Bridge No. 80 will be replaced on the existing alignment. Traffic will be detoured offsite (see attached Detour Map) during the construction period. The offsite detour for this project (approximately 5.5 miles in length) would include Abraham Road (S.R. 1512), Round Hill Road (S.R. 1511), Vallie Road (S.R. 1505), Country Club Road (S.R. 1503), U.S 601, and Reece Road (S.R. 1513).

Bicycle and Pedestrian Accommodations:

This portion of Abraham Road (S.R. 1512) is not designated as a bicycle route. No specific accommodations will be included in the project. This exception was reviewed and approved by the Complete Streets Review Team on April 7, 2020.

Human Environment:

Cultural Resources

Under NCDOT's programmatic agreement with the NC State Historic Preservation Office (SHPO) for bridge replacement projects, NCDOT reviewed the study area to determine the potential for historic architectural and archeological resources. The reviews concluded no survey required for historic architecture and archeological resources.

Environmental Justice

While census data indicates low-income populations are present in the Demographic Study Area (DSA), no notably adverse community impacts are anticipated with this project; thus impacts to minority or low-income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community. No disparate impacts are anticipated under Title VI and related statutes.

Prime Farmlands

See response to question 30 in Section G.

Natural Environment:

Water Resources

Water resources within the project study area include two unnamed tributaries to North Deep Creek. The best usage classification for both resources is C.

The project is located in the Yadkin – Pee Dee River Basin and is not subject to NCDEQ regulated riparian buffer rules.

There are two potential jurisdictional streams and four potential jurisdictional wetlands in the study area. The project may impact 73 linear feet of streams and 0.001855 acres of wetlands.

The North Carolina 2018 Final 303(d) list of impaired waters identifies one impaired water within the study area or within 1.0 mile downstream of the study area. The impaired stream within the study area is listed as impaired due to Fecal Coliform.

The floodplain associated with the unnamed tributary to North Deep Creek at the project site is identified as Zone AE.

Threatened and Endangered Species

As summarized in the August 2019 Natural Resources Technical Report (NRTR) and subsequent memorandum, NCDOT anticipates to have no effects on any federally-protected species.

Anticipated Permit or Consultation Requirements:

A Nationwide Permit (NWP) will likely be required for impacts to "Waters of the United States" resulting from this project.

In addition, an NCDWR Section 401 Water Quality General Certification (GC) may be required prior to the issuance of a Section 404 Permit. The USACE holds the final discretion as to what permit will be required to authorize project construction.

Public Outreach:

A newsletter was distributed in the mail to notify the public of the prosed project and proposed detour during the construction period. The newsletter provided contact information for the public if they had any questions or comments. The public comment period was open from December 17, 2019 to January 10, 2020. No comments were received.

A tribal coordination letter was sent on December 16, 2019 to the Catawba Indian Nation. Comments on the proposed project were requested by January 17, 2020. The Catawba Indian Nation responded on January 16, 2020 that they are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of the project.

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)			
Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31.			
• /	f any question 1-7 is checked "Yes" then NCDOT certification for FHWA approval is ref f any question 8-31 is checked "Yes" then additional information will be required for the n Section G.		stions
	OJECT IMPACT THRESHOLDS WA signature required if any of the questions 1-7 are marked "Yes".)	Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?		V
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?		V
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?		V
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?		V
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?		V
6	Does the project require an Individual Section 4(f) approval?		$\overline{\checkmark}$
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?		V
	y question 8-31 is checked "Yes" then additional information will be required for those tion G.	questio	ns in
Othe	er Considerations	Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?		$\overline{\checkmark}$
9	Is the project located in anadromous fish spawning waters?		\checkmark
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	V	
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?		V
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?		$\overline{\checkmark}$
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?		V

<u>Othe</u>	er Considerations for Type I and II Ground Disturbing Actions (continued)	Yes	No
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?		V
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?		V
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?		
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)?		$\overline{\checkmark}$
18	Does the project require a U.S. Coast Guard (USCG) permit?		
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?		V
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?		$\overline{\checkmark}$
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?		V
22	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?		V
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?		V
24	Will maintenance of traffic cause substantial disruption?		$\overline{\checkmark}$
25	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?		V
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), Tribal Lands, 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?	Ŋ	
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?		V
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?		$\overline{\checkmark}$
29	Is the project considered a Type I under the NCDOT Noise Policy?		V
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	V	
31	Are there other issues that arose during the project development process that affected the project decision?		$\overline{\checkmark}$

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G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

Response to Question 1: NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.

Response to Question 10: The North Carolina 2018 Final 303(d) list of impaired waters identifies one impaired water within the study area or within 1.0 mile downstream of the study area. The impaired stream within the study area is listed as impaired due to Fecal Coliform.

Response to Question 16: 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. This is noted in the green sheet / project commitments.

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP) to determine status of the 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).

Response to Question 26 – Conservation Easement

A conservation easement was created on November 14, 2019 within the project study area and adjacent to the proposed project. The conservation easement was made between the Twiman L. Caudle Trust (property owner) and Unique Places to Save (a non-profit corporation). The restoration, enhancement and preservation of the Conservation Easement Area is a condition of the approval of the Yadkin 01 Umbrella Mitigation Banking Instrument (UMBI) and Twiman Mitigation Plan. The Twiman Mitigation Site has been approved by the USACE for use as a mitigation bank to compensate for unavoidable stream and wetland impacts authorized by Department of the Army permits.

The NCDOT-Environmental Analysis Unit (EAU) has contracted a firm to develop the mitigation site. As of March 30, 2020, the full number of mitigation credits available at the site have not been quantified.

NCDOT-SMU will coordinate with EAU to quantify the number of mitigation credits that could be affected by the encroachment from the BR-0109 project.

The proposed BR-0109 project would impact approximately 0.05378 acres of the easement.

Response to Question 30 – Prime and Important Farmlands

Prime and Important Farmland Soils as defined by the Farmland Protection Policy Act (FPPA) are located within the project footprint.

A preliminary screening of farmland conversion impacts in the project area has been completed (NRCS Form AD-1006 for point projects) and a total score of 66 out of 160 points was calculated for the BR-0109 project site (See Appendix D of BR-0109 Community Impact Assessment, November 2019). Since the total site assessment score exceeds the 60-point threshold established by NRCS, notable project impacts to eligible soils are anticipated.

NCDOT submitted an evaluation request to NRCS in January 2020 and received notification that the area to be affected is so small that the Farmland Conversion Impact Rating cannot be measured; therefore, the project is exempt from completing the AD-1006 form. No further action is needed.

H. Project Commitments (attach as Green Sheet to CE Form):

NCDOT PROJECT COMMITMENTS

STIP Project No. **BR-0109**Replace Bridge 80 on Abraham Road (S.R. 1512) over unnamed tributary to North Deep Creek
Yadkin County
Federal Aid Project No. N/A
WBS Element 49217.1.1

NCDOT Division 11 Continued Coordination Emergency Services

NCDOT should coordinate with Yadkin County Emergency Services (Mr. Keith Vestal, 336.849.7622) at least one month prior to construction.

NCDOT Construction Management

Erosion and sediment control BMPs will be implemented in accordance with NCDOT's Design Standards in Sensitive Watersheds during the design and construction for this project in and around the unnamed tributary to North Deep Creek.

FEMA Floodplains and Floodways (Division 11 Construction, NCDOT SMU)

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.

Floodplain Mapping Coordination (NCDOT Hydraulic Design Unit)

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).

Conservation Easement / Mitigation Bank Coordination (NCDOT SMU and EAU)

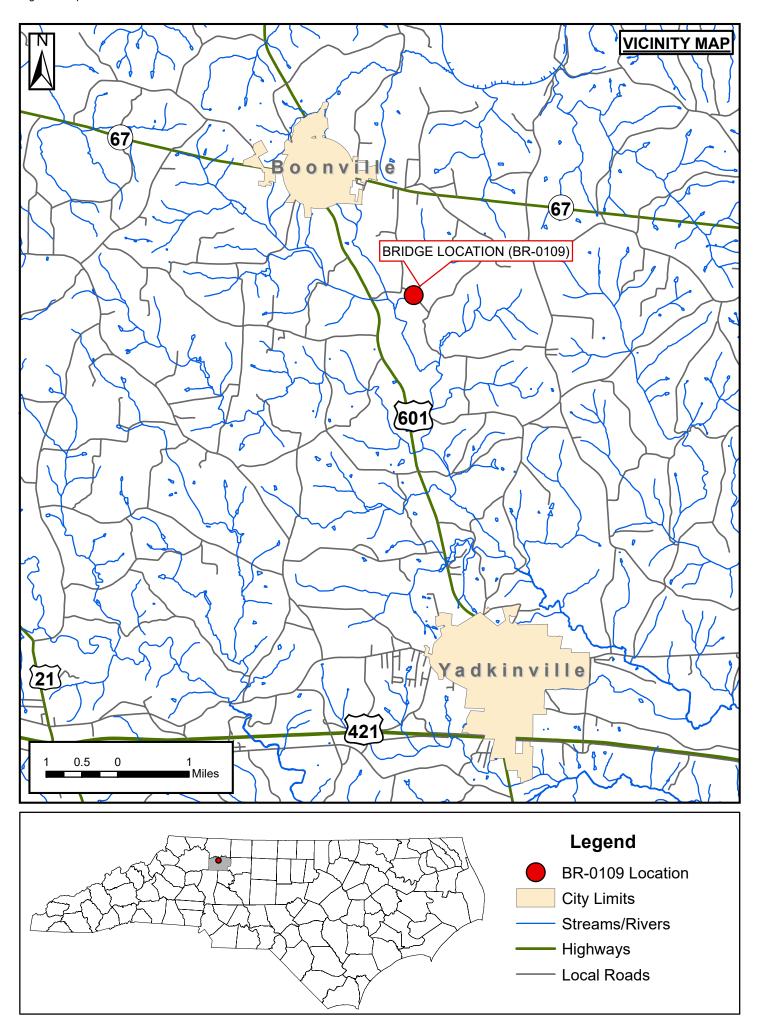
NCDOT-SMU will coordinate with EAU to quantify the number of mitigation credits that could be affected by the encroachment from the BR-0109 project.

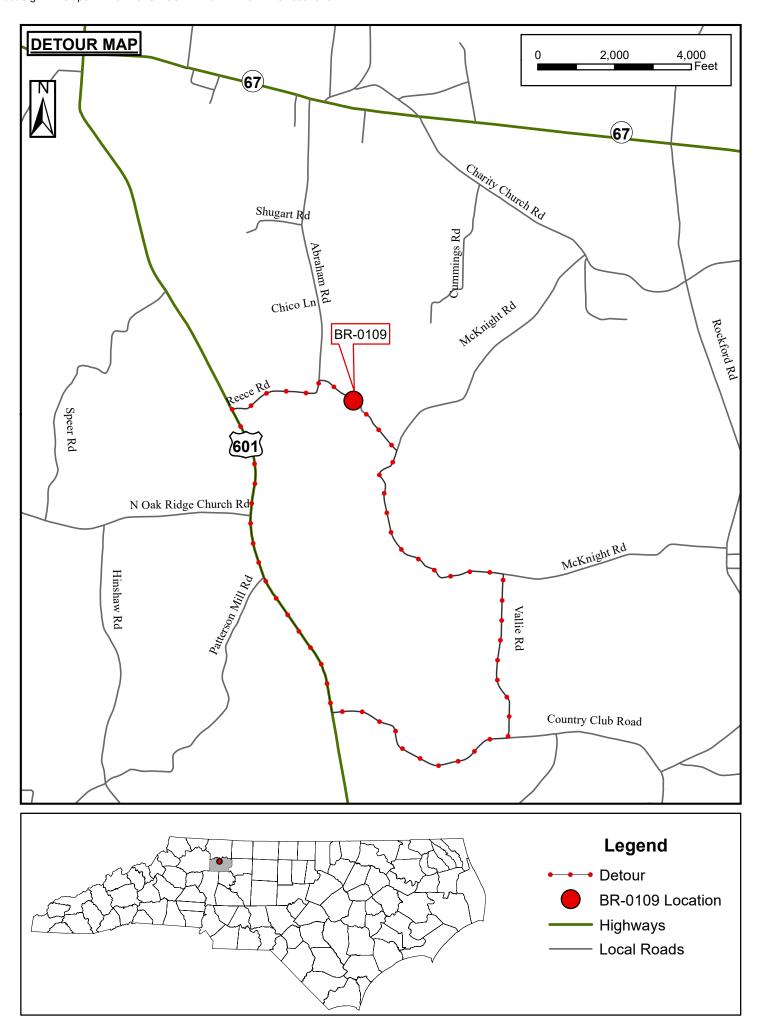
I. Categorical Exclusion Approval:

STIP Project No.	BR-0109	
WBS Element	49217.1.1	
Federal Project No.	. N/A	
Prepared By:		
5/5/20	Darren Even	
Date	Darren Even, AICP, Senior Planner Dewberry Engineers, Inc.	
Prepared For:	NCDOT Structures Management Unit	
Reviewed By: 5/11/2020 Date	Philip S. Harris, III Philip S. Harris, III, PE, Environmental Analysis Unit	
✓ Approve	If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.	
Certifie	If classified as Type III Categorical Exclusion. Docusigned by:	
5/11/2020	Kevin Fischer	
	Kevin Fischer, PE, Assistant State Structures Engineer Structures Management Unit North Carolina Department of Transportation	
FHWA Approved: F	For Projects Certified by NCDOT (above), FHWA signature required.	
	John F. Sullivan, III, PE, Division Administrator Federal Highway Administration	

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).

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19-08-0011



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

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

PROJECT INFORMATION Project No: BR-0109 Yadkin County: WBS No.: 67109.1.1 Document CE Type: Fed. Aid No: N/A X State Funding: Federal **Federal** X Yes No Permit **USACE** Permit(s): Type(s): **Project Description**: Replace Bridge No. 980080 on SR 1512 (Abraham Road) over Creek. SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW Description of review activities, results, and conclusions: Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on August 23, 2019. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is defined on the following maps. There are no National Register listed or eligible properties and no survey is required. If design plans change, additional review will be required. Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area: HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Yadkin County survey, Yadkin County GIS/Tax information, and Google Maps are considered valid for the purposes of determining the likelihood of historic resources being present. There are no National Register listed or eligible properties within the APE and no survey is required. SUPPORT DOCUMENTATION Photos Map(s) Previous Survey Info. Correspondence Design Plans FINDING BY NCDOT ARCHITECTURAL HISTORIAN Historic Architecture and Landscapes -- NO SURVEY REQUIRED 8/23/2019 NCDOT Architectural Historian Date

19-08-0011



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 INF	ORMATION				
Project No:	BR-0109	Coun	ıty:	Yadkin	
WBS No:	67109.1.1	Docu	ument:	Federal CE	
F.A. No:		Fund	ling:	☐ State	
Federal Permit	Required?	⊠ Yes □ No	Permi	t Type: USAC	EE

Project Description: Replacement of Bridge 131 on SR 1512 (Abraham Road) over an unnamed tributary to North Creek in Yadkin County, North Carolina. The archaeological Area of Potential Effects (APE) encompasses the entire project study area as depicted on the attached ARC-GIS mapping. It measures 1,000ft in length (500ft from each bridge end-point) and 150ft in width (75ft from the SR 1512 centerline).

SUMMARY OF CULTURAL RESOURCES REVIEW

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

Permitting and funding information was reviewed for determining the level of archaeological input required by state and federal laws. Based on the submitted "request for cultural resources review" form, the project is federally-funded with federal permit interaction. As such, Section 106 of the National Historic Preservation Act will apply and the United States Army Corps of Engineers (USACE) will serve as the lead federal agency. Next, construction design and other data was examined (when applicable) to define the character and extent of potential impacts to the ground surfaces embracing the project locale. The APE was primarily designed to capture any federal permit areas or areas of potential ground disturbing activity.

Once an APE was outlined, a map review and site file search was conducted at the Office of State Archaeology (OSA) on Wednesday, September 11, 2019. No NRHP eligible archaeological sites or any other previously documented archaeological sites are located within the APE or proximal.

Examination of National Register of Historic Places (NRHP), State Study Listed (SL), Locally Designated (LD), Determined Eligible (DE), and Surveyed Site (SS) properties employing resources available on the NCSHPO website is important in establishing the location of noteworthy historic occupations related to a perspective construction impact area. A cross-check of these mapped resources concluded that no meaningful historic properties with possible contributing archaeological elements were located inward of the archaeological APE margins. In addition, historic maps of Yadkin County were appraised to identify former structure locations, land use patterns, or other confirmation of historic occupation in the project vicinity. Archaeological/historical reference materials were inspected as well. In general, the cultural background review established that no NRHP listed properties or cemeteries are located within the APE. Based on cultural-historical factors, the APE is considered to have a low potential for the documentation of archaeological resources.

Further, topographic, geologic, flood boundary, and NRCS soil survey maps were referenced to evaluate pedeological, geomorphological, hydrological, and other environmental determinants that may have resulted in past occupation at this location. Aerial and on-ground photographs (NCDOT Spatial Data Viewer) and the Google Street View map application (when amenable) were also examined/utilized for additional assessment of disturbances, both natural and human induced, which compromise the integrity of archaeological sites. Environmental/impact factors do not suggest a heightened potential for archaeological resource recovery.

19-08-0011

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

Soil data illustrates that the majority of ground surfaces within the APE are moderately eroded or occasionally flooded. Environmental and cultural-historical factors do not suggest a heightened potential for archaeological resource recovery in the APE. Intact NRHP eligible archaeological sites are unlikely to be present or preserved within the currently defined APE. No further consultation is advocated. A finding of "no archaeological survey required" is considered appropriate.

This project falls within a North Carolina County in which the Catawba Indian Nation has expressed an interest: Yadkin County. It is recommended that you contact each federal agency involved with your project to determine their Section 106 Tribal consultation requirements.		
SUPPORT DOCUMENTATION		
See attached: Map(s) Previous Survey Info Photocopy of County Survey Notes	Photos Other:	Correspondence
FINDING BY NCDOT ARCHAEOLOGIST		
NO ARCHAEOLOGY SURVEY REQUIRED		
Good Eine Halvare		11-3-2019
NCDOT		

BEGIN BRIDGE _L_ STA. 28 + 24 +/_ END BRIDGE -L- STA. 28 + 84 +/-

PROJECT LENGTH

LENGTH ROADWAY PROJECT BR-0109 = 0.053 MILES

LENGTH STRUCTURE PROJECT BR-0109 = 0.011 MILES

= 0.064 MILES

TOTAL LENGTH PROJECT BR-0109

(ABRAHAM 1512 ROAD)

DESIGN EXCEPTION FOR SAG VERTICAL CURVE K VALUE AND NIGHTTIME VERTICAL SSD. Plans Prepared For:

018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

JANUARY 17, 2020

LETTING DATE:

JULY 21, 2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DAVID STUTTS, PE

M. TRAVIS POTTS, PE

DAVE JANOSKO, PE

PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN

ENGINEER

SIGNATURE:

-L- SR 1512 (ABRAHAM ROAD)

PE

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

(REECE ROAD)

GRAPHIC SCALES

PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

50 25 0

BEGIN TIP PROJECT BR-0109

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD

V = 55 MPH

DESIGN DATA

FUNC CLASS =

SUB-REGIONAL TIER

LOCAL

ADT 2015 = 440

ADT 2040 = 880

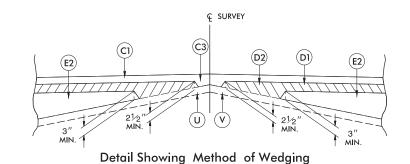
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

-L-STA 27+10.00

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	5/3	
	<u> </u>	

	PAVEMENT SCHEDULE *TO BE UPDATED WHEN DESIGN RECEIVED
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE ??.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE ??.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD.
СЗ	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE ??.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1½" OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE ???.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE ???.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN $2^1\!\!\!/_2$ " OR GREATER THAN 4 " IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE ???.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE ???.??, AT AN AVERAGE RATE OF ??? LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5½" IN DEPTH.
J	8" AGGREGATE BASE COURSE
Т	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING, 0" TO 11/2"
w	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



EXISTING PAVEMENT MILLED 1 1/2" EXISTING PAVEMENT

25' MIN. AS DIRECTED BY ENGINEER Incidental Milling Existing Pavement



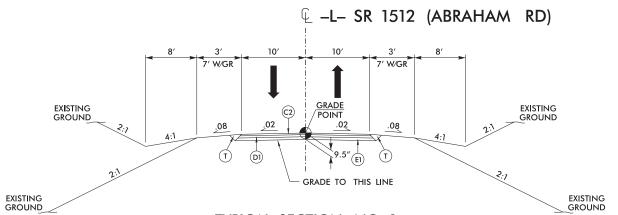
ms consultants, inc. 920 Mair Campus Drive Suite 430 Raleigh, NC 27606 NC Licerse Number : C-3239

PROJECT REFERENCE NO. SHEET NO. ROADWAY DESIGN ENGINEER INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRADE POINT .02 EXISTING GROUND EXISTING GROUND C2 .08 GRADE TO -EXISTING EXISTING GROUND _GROUND

TYPICAL SECTION NO. 1

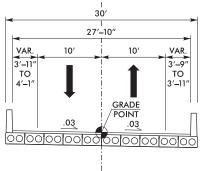
- -L- STA. 27+10.00 TO -L- STA. 28+00.00
- -L- STA. 29 + 00.00 TO -L- STA. 30 + 00.00



TYPICAL SECTION NO. 2

- -L- STA. 28+00.00 TO -L- STA. 28+24 +/- (BEGIN BRIDGE) -L- STA. 28+84 +/- (END BRIDGE) TO -L- STA. 29+00.00
- -L- STA. 30+00.00 TO -L- STA. 30+50.00

-L- SR 1512 (ABRAHAM RD)



TYPICAL SECTION NO. 3

-L- STA. 28+24 +/- (BEGIN BRIDGE) TO -L- STA. 28+84 +/- (END BRIDGE)

