Type III Categorical Exclusion Action Classification Form

STIP Project No.	HB-0001
WBS Element	49475.1.1
Federal Project No.	NHPB-0001(156)

A. Project Description:

As part of State Transportation Improvement Program (STIP) Project HB-0001, the North Carolina Department of Transportation (NCDOT) is proposing to replace the existing two-lane, 2.83-mile-long Lindsay C. Warren Bridge (Tyrrell County Bridge No. 7) on U.S. 64 over the Alligator River in Tyrrell and Dare Counties, North Carolina (refer to **Figure 1** and **Figure 2**). The Alligator River Bridge Replacement project will replace the existing swing-span bridge with a modern two-lane, fixed-span, high-rise bridge on new location, just north of the existing bridge. The project is approximately 4.6 miles in length.

B. Description of Need and Purpose:

Constructed in 1960, the Lindsay C. Warren Bridge is classified as "structurally deficient" with a rating of 31.71 out of 100 possible points. The existing bridge is experiencing substantial deterioration due to its age and structural deficiencies resulting in the need for extensive and costly ongoing maintenance with mechanical replacement parts for the swing span that are not readily available and that typically require custom fabrication. This results in lengthy timeframes, as well as higher than normal costs for repair and jeopardizes the bridge's ability to provide a reliable connection between Columbia, Manns Harbor, Manteo, and the Outer Banks.

The need for the project is demonstrated by the following summary of existing and projected conditions:

- Replacement is critical due to the age and structural deficiency of the bridge. The existing bridge is a 2.83-mile long, 2-lane bridge consisting of 343 spans with a moveable steel swing span. The bridge was constructed in 1960 and is classified as structurally deficient with a sufficiency rating of 31.71 out of a possible 100.
- The existing bridge requires costly, heavy maintenance on a regular basis and requires constant smaller maintenance activities to keep the swing mechanism operational.
- In November 2019, a \$17 million major rehabilitation project was completed on the bridge, consisting of several hundred pile jackets, concrete repair, deck surfacing, and a major mechanical overhaul of the swing mechanism and controls. Similar rehabilitation efforts will be needed within the next 7 years.
- Even with the major rehabilitation, NCDOT Division 1 staff is required to perform regular maintenance of the swing mechanism, which has a history of malfunction, resulting in closure of the bridge to vehicular travel. The mechanical parts, gears, and controls are not readily available and require custom fabrication with long lead times to acquire and replace.

The purpose of the proposed project is:

• To replace the existing two-lane, 2.83-mile-long Lindsay C. Warren Bridge, Tyrrell County Bridge No.7, carrying U.S. 64 across the Alligator River with a two-lane, high-rise, fixed-span bridge.

C. Categorical Exclusion Action Classification:

Type III

D. Proposed Improvements:

NCDOT Preferred Alternative

The HB-0001 project will replace the existing bridge with a modern two-lane, fixed-span bridge providing a vertical navigable channel clearance of 65-feet. The proposed typical cross section consists of two 12-foot travel lanes, undivided, with 8-foot outside shoulders on the bridge deck and 10-foot shoulders (5-foot paved) on the roadway approaches. The proposed typical sections for the roadway approaches (Typical Section No. 1) and the bridge deck (Typical Section No. 2), are shown in **Figure 4** and **Figure 5**.

The project begins in Tyrrell County on U.S. 64, west of the Alligator River Marina. The new bridge alignment diverges from the existing U.S. 64 alignment, passes north of an existing marina/convenience store (Alligator River Marina), and crosses the Alligator River to the north of the existing bridge. The project ends in Dare County and ties back into the existing U.S. 64 alignment, east of Old Ferry Landing Road. The total project length is approximately 4.24 miles. During construction, vehicular traffic will be maintained on the existing bridge, marine traffic will continue to use the existing navigation channel, and the swing span bridge will continue to function.

Other Alternatives Evaluated

When planning activities began in late 2020 for the HB-0001 project, it was decided to draw upon the extensive environmental studies that were conducted for the bridge and approach sections of the previous R-2544/R-2545 project. Given the requirement for a new crossing of the Alligator River to maintain traffic on the existing bridge, the crossing itself would not differ other than the travel lane requirement being reduced from four lanes to two. With land use and environmental features remaining essentially the same, the previous extensive alternatives analysis for the river crossing portion of the R-2544/R-2545 project, which included six bridge alignment options, was utilized as a starting point.

The Least Environmentally Damaging Practicable Alternative (LEDPA) bridge alignment from the previous R-2544/R-2545 project was carried forward into the HB-0001 project since concurrence on LEDPA was previously achieved with the NEPA/404 Merger Team and the other alternatives had been dropped from further consideration. To further verify this, the original alternatives were reviewed again based on the smaller overall footprint of the 2-lane roadway proposed for the HB-0001 project. This review verified that the LEDPA would not change based on the smaller cross section of the current project.

NCDOT also developed four roadway approach alignment alternatives on the western approach in Tyrrell County to minimize impacts to the Palmetto-Peartree Preserve parcel, located on the north side of existing U.S. 64 and owned by The Conservation Fund. NCDOT, in coordination with the Merger Team, selected Approach Alternative 3 as the Preferred Alignment Alternative for the western approach because it resulted in the greatest balance between impacting the Palmetto-Peartree Preserve and providing a safe roadway for the traveling public.

Cost Estimates

HB-0001 is included as an amendment to the 2020-2029 NCDOT STIP and is currently programmed for planning and environmental studies only. Cost estimates for the Preferred Alternative are provided in **Table 1**.

Table 1: HB-0001 Project Cost Estimates (as of June 2021)

	Cost
Right of Way	\$436,100
Utility	\$129,300
Construction	\$211,700,000
TOTAL	\$ 212,265,400

Project Impacts

As discussed above, the HB-0001 project proposes a 2- lane typical section for the roadway and bridge. The project limits extend far enough for the roadway approaches of the new bridge to tie back into the existing alignment of U.S. 64. Environmental features located with the project study area, along with the proposed alignment are shown in **Figures 3, 3a, and 3b**.

Using the typical roadway cross sections shown in **Figure 4** and **Figure 5**, and the NCDOT Preferred Alignment Alternative for the HB-0001 bridge replacement, the following impact calculations were developed using the "slope stake limit plus 25 feet" buffer on either side of the alignment as a footprint to overlay on available, current environmental resource data in a Geographic Information System (GIS) application. The resulting estimated impacts are included in **Table 2** below:

Table 2: Potential Environmental Effects, HB-0001 Preferred Alternative

Resources	Impact	Notes
Built Environment		
Underground Storage Tanks (UST)	0	Closest USTs are located at Alligator River Marina and will be avoided
Cultural Resources	1	The Lindsay C. Warren, Tyrrell County Bridge No. 7 (Determined Eligible for listing in the National Register of Historic Places) will be demolished as part of the project
Relocated Structures (Residences/Businesses/Non- Profit)	0	
Communication Tower	0	
Cemetery	0	
Managed Areas (acres)		
Alligator River Game Lands	0.03	These impacts are due to the slope stakes plus 25-foot estimating methodology. NCDOT anticipates that these impacts will be eliminated as final design progresses and the buffer is removed
Alligator River National Wildlife Refuge	0.0	
Conservation Fund-owned land (Palmetto-Peartree Preserve)	1.2	Impact based on 150' Right of Way for the NCDOT Preferred Alignment (Alt 3) on the western approach
Natural Environment (acres)		
Prime Farmland	8.7	All acres are classified "Prime if Drained." Preliminary screening of farmland conversion impacts resulted in a total score of 55 out of 160 points, which is less than the 60-point threshold established by NRCS; therefore, no further analysis of farmland conversion impacts is required
Soils Impacts (Including Estuarine Open Water)	19.8	

Table 2: Potential Environmental Effects, HB-0001 Preferred Alternative

Resources		Impact	N	otes
Plant Communities (excludes Mai Ag land)	ntained/Disturbed and	16.5		
Canal Relocation		0.3		
			Species with Habitat (Biological Conclusions, April 2021 NRTR and RCW Draft BA) ^{1,2} :	
Threatened & Endangered Specie	es Habitat	Yes	American Alligator (Not Required) Black rail (MA-NLAA) Northern long- eared bat (MA-LAA) Red wolf (MA-NLAA)	Red-cockaded woodpecker (MA-LAA) West Indian manatee (MA-NLAA) Shortnose sturgeon (MA-NLAA) Atlantic sturgeon (MA-NLAA) Bald eagle (No Effect)
Essential Fish Habitat		Yes	Alligator River	
Coastal Area Management Act ((CAMA) Resources (acı	res)		
Estuarine Public Trust Waters		0.1		
Inland Public Trust Waters		0.0		
Inland Public Trust Waters Shorel	ines (30-foot buffer)	0.0		
Estuarine Public Trust Waters Sho	orelines (75-foot buffer)	1.6		
Outstanding Resource Waters (Olfeet)	RW) Shorelines (575	0.0	the Alligator Ri existing bridg	ignated portion of ver is south of the e, ending at the idge
O t - I W - tl I -	Tyrrell County	0.09		
Coastal Wetlands	Dare County	0.03		
Non-CAMA Resources (acres)				
Mottondo	Tyrrell County	8.6	Excludes Coastal	
Wetlands	Dare County	6.7	Wetlands (listed above)	
Surface Waters	Tyrrell County	0.05	Included Ponds and Tributaries	
Notes: Impacts hased on slone stakes plus	Dare County	0.3		

Notes: Impacts based on slope stakes plus 25ft.; the HB-0001 bridge length is based on the original R-2544/R-2545 design that was established at that project's Merger Concurrence Point 4A meeting; however, the final bridge length for the HB-0001 project will be determined during the subsequent final design phase.

¹ MA-LAA denotes "May Affect, Likely to Adversely Affect"

² MA-NLAA denotes "May Affect, Not Likely to Adversely Affect"

E. Special Project Information:

Assessment of whether consideration of the Alligator River Bridge replacement using the previously selected LEDPA corridor for R-2544/R-2545 results in "Segmentation" under NEPA

The replacement of the Lindsay C. Warren Bridge over the Alligator River was previously identified within the larger 27.3 mile long widening of the U.S. 64 Corridor in Tyrrell and Dare Counties (NCDOT STIP Project R-2544/R-2545). The R-2544/R-2545 project was progressing through NCDOT's Merger Process until it was removed from the STIP due to lack of funding. A state DEIS was signed in January 2012. The replacement of the Alligator River Bridge was identified as a specific need within the R-2544/R-2545 project, with the acknowledgement that the age and condition of the structure may dictate its replacement before other sections of the greater roadway project were constructed. A Preferred Alternative/LEDPA was selected for the bridge and its approaches by the Merger Team on December 11, 2012.

The environmental planning and preliminary design phase for the HB-0001 project began in late 2020, with the assumption that Federal funding would be secured for construction of the bridge, thereby making the Federal Highway Administration (FHWA) the Lead Federal Agency for the project. In January 2021, at a Merger Screening Meeting, FHWA, the U.S. Army Corps of Engineers (USACE), and NCDOT determined that the HB-0001 project would proceed through the NEPA/404 Merger process as a standalone project.

On March 10, 2021, the Merger Team was convened to review the proposed HB-0001 project. The team concurred on the Purpose and Need to replace the Alligator River Bridge as a single and complete project. The Merger Team also agreed on project limits and a study area (Concurrence Point 1; CP1).

On April 21, 2021, the Merger Team identified sections from the R-2544/R-2545 project that provided for logical termini for the HB-0001 bridge replacement and defined a project sufficient in length to address environmental matters on an appropriate scope (CP2). The study area for the bridge replacement from the R-2544/R-2545 project was refined, and specific project termini were selected to allow assessment of the full range of alternatives previously considered for the replacement of the bridge and its approaches, and to provide logical tie-in points to the existing U.S. 64 roadway.

On June 23, 2021, the Merger Team confirmed the previously selected bridge alignment Preferred Alternative for the Alligator River Bridge replacement. It was determined that this alignment avoided and minimized impacts to resources and was the LEDPA (CP3).

FHWA has reviewed Title 23 Code of Federal Regulations Section 771.111(f) and the FHWA Memorandum titled "The Development of Logical Project Termini" (November 5, 1993), to ensure the HB-0001 Preferred Alternative/LEDPA is in regulatory compliance with regards to logical termini. The review indicates that the Preferred Alternative/LEDPA selected for project HB-0001 Bridge Replacement does not immediately prescribe transportation solutions beyond the proposed project, and that it also does not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements, east or west of the limits of this project. The project has independent utility and evaluates environmental issues on a sufficiently broad scope to ensure that the project will function properly without requiring additional improvements elsewhere. After reviewing the study area, the limits and termini of the Preferred Alternative/LEDPA, and after assessing whether the proposed project restricts future foreseeable projects, FHWA has determined that the Preferred Alternative is not segmented in its scope or in its assessment of environmental impacts, consistent with the 23 CFR 771.111(f) regulations.

Wildlife Crossings

To improve wildlife habitat connectivity within the project study area, wildlife crossing structures and barrier fences have been included in the project designs to help eliminate road-kills and increase permeability of the roadway for the wide diversity of wildlife in the area. The new section of the bridge over land will allow for larger animal passage between the end bent and the shoreline. In addition, two arched pipes (53"X41"), one located on each approach to the bridge, are included to accommodate smaller wildlife crossing the U.S. 64 corridor.

Directional fencing will be installed to direct wildlife to these pipes and to the larger openings under the bridge to keep wildlife from crossing the roadway where it could potentially be struck by vehicular traffic.

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The areas under the bridge that are designed to accommodate larger animals will include 10-foot barrier fencing with 3-foot herptile-excluding mesh at the base of the fence (buried 1-foot below grade). The arched pipes will include standard 4-foot to 5-foot field fence with attached 3-foot herptile-excluding mesh, buried 1-foot below grade. Barrier fencing will be constructed of non-combustible materials, per NCDOT's most current "Wildlife Fence Detail." In addition, access gates in the wildlife fencing will be installed at appropriately designated intervals to allow for maintenance access.

Public Involvement

There are no known or anticipated concerns or controversies relative to this project, however, there has been no public outreach conducted for the HB-0001 bridge replacement project as of June 2021. Funds for right of way acquisition and construction are anticipated to be secured in the near future by NCDOT, but have not yet been identified, and public engagement will not commence until such funding is secured. Public engagement activities will be coordinated with NCDOT Public Involvement prior to completion of the final designs and right of way plans to ensure full and fair participation of all potentially affected communities in the transportation decision-making process.

Bridge Design

Detailed design work related to the bridge structure, geotechnical foundations, and stormwater drainage is underway with the goal of developing a bridge structure that maximizes span lengths and minimizes the number of piers and foundations required to be constructed and located both in the Alligator River, as well as on the shorelines of each approach.

Due to the length of the proposed structure and its anticipated height above Mean High Water (MHW), an open drainage system for the deck is anticipated.

In addition, hydrodynamic modeling will be conducted by a coastal engineering firm and the results will be used to help determine the appropriate design for the bridge's superstructure, substructure, and foundations.

Section 106 Memorandum of Agreement

NCDOT and FHWA coordinated with NC-HPO on a Section 106 Memorandum of Agreement (MOA) that addresses the impact to the existing Lindsay C. Warren Bridge, which has been determined eligible for listing in the National Register of Historic Places. Mitigation efforts in the MOA include two-bar metal rail for the replacement structure, four stand-alone decorative panels and support structures, and photographic recordation of the existing bridge. Continued coordination with SHPO on these mitigation measures will occur as the project moves into the final design phase.

Additional Documentation

The project figures, Section 106 Re-Initiation Letter, Section 106 Memorandum of Agreement, Programmatic Section 4(f), State Historic Preservation Office Effects Determination forms, and tribal coordination letters are appended to this document (see **Appendix A**).

The technical reports and additional documentation listed below can be found in the NCDOT project file:

- Natural Resources Technical Report
- Red-Cockaded Woodpecker and Bald Eagle Biological Assessment
- Direct and Indirect Screening Tool
- GeoEnvironmental Phase I Report
- Traffic Noise Analysis Report
- Submerged Aquatic Vegetation (SAV) Report Memo
- Natural Resources Conservation Service (NRCS) Farmland Conversion Screening

F. Project Impact Criteria Checklists:

F3.	F3. Type III Actions			
Proposed improvement(s) that fit Type III Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix C) answer questions below.				
• /	NCDOT will certify the Categorical Exclusion for FHWA approval. If any questions are marked "Yes" then additional information will be required for those Section G.	questic	ons in	
		Yes	No	
1	Does the project involve potential effects to Threatened or Endangered species listed by the US 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?		$\overline{\mathbf{A}}$	
5	Does the project involve substantial residential or commercial displacements or right of way acquisition?		$\overline{\mathbf{A}}$	
6	Does the project include a determination under Section 4(f)?	V		
7	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?		V	
8	Does the project impact anadromous fish spawning waters?	V		
9	Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply Watershed Critical Areas, 303(d)-listed impaired water bodies, buffer rules, or submerged aquatic vegetation (SAV)?			
10	Does the project impact Waters of the United States in any of the designated mountain trout streams?		V	
11	Does the project require a US Army Corps of Engineers (USACE) Individual Section 404 Permit?	V		
12	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?		V	
13	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	Ø		
14	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	V		
15	Does the project require work encroaching and adversely effecting 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?			
16	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Areas of Environmental Concern (AEC)?	V		

Type III Actions (continued)		Yes	No
17	Does the project require a US Coast Guard (USCG) permit?	V	
18	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?		V
19	Does the project involve Coastal Barrier Resource Act (CBRA) resources?		V
20	Does the project impact federal lands (e.g. US Forest Service (USFS), US Fish and Wildlife Service (USFWS), etc.) or Tribal (Trust) Lands?		$\overline{\mathbf{A}}$
21	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?		$\overline{\mathbf{A}}$
22	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?		$\overline{\mathbf{A}}$
23	Will maintenance of traffic cause substantial disruption?		V
24	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?		$\overline{\mathbf{V}}$
25	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, 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?		
26	Does the project involve Federal Emergency Management Act (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?		$\overline{\mathbf{A}}$
27	Is the project considered a Type I under the NCDOT's Noise Policy?	$\overline{\mathbf{A}}$	
28	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	V	
29	Is the project in an Air Quality non-attainment or maintenance area for a National Ambient Air Quality Standard (NAAQS)?		$\overline{\mathbf{V}}$
30	Are there other issues that arose during the project development process that affected the project decision?		$\overline{\checkmark}$

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

Response to Question 1 – Threatened and Endangered Species

Northern long-eared bat

The US Fish and Wildlife Service has revised the previous programmatic biological opinion (PBO) in conjunction with FHWA, 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. Although this programmatic covers Divisions 1-8, NLEBs are currently only known in 22 counties, but may potentially occur in 8 additional counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. At this time, these conservation measures only apply to the 30 currently known/potential counties shown on Figure 2 of the PBO. The programmatic determination for NLEB for the NCDOT program is **May Affect, Likely to Adversely Affect**. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Dare and Tyrrell counties, where *v2019.1 HB-0001* Type III CE

HB-0001 is located.

Red Wolf

Suitable habitat for the red wolf, consisting of heavy vegetative cover and suitable availability of prey, is present within the study area. A review of North Carolina National Heritage Program (NCNHP) records, accessed March 25, 2021, indicates one known occurrence (EO ID: 23088) within 1.0 mile of the study area. Roadway improvements at either bridge approach are likely to result in only temporary disturbances and temporary territorial shifts for the red wolf. A biological conclusion of **May Affect**, **Not Likely to Adversely Affect** was reached for this species.

In an email to NCDOT, dated July 12, 2021, USFWS stated:

"Since, through avoidance and minimization efforts, we have now avoided all impacts to the Alligator River National Wildlife Refuge, the red wolf does not come into play for Section 7. The species in North Carolina is considered Experimental, Non-Essential. This means it is treated as federally threatened on National Wildlife Refuge and National Park Service lands only. Off of these federal lands it is considered "proposed", which does not require consultation. We often recommend doing Section 7 conference for proposed species, but that is probably not necessary for the red wolf since it appears the "proposed" status will not change anytime soon. If the status was to change in the future, it would only need informal consultation at that time."

Black Rail

Suitable habitat for the black rail is present within the study area; however, minimal impacts to large marsh areas are anticipated to result from the project. No surveys for this species have been performed. A review of NCNHP records, accessed March 25, 2021, indicates no known occurrences within 1.0 mile of the study area. A biological conclusion of **May Affect, Not Likely to Adversely Affect** was reached for this species.

Informal consultation is anticipated for the black rail; any mitigation measures developed as part of the Section 7 Consultation process for these species will be incorporated into the final design for the project.

Red Cockaded Woodpecker (RCW)

One active and two abandoned RCW clusters are known to occur within a 0.5-mile radius of the proposed project. A Biological Evaluation Report for the RCW was completed in June 2021. No live RCW cavity trees will be removed or impacted by the proposed project. However, the project will impact foraging habitat for RCW Cluster TYR 63. This cluster is deficient in pine basal area (BA) pre- and post-project using the Regional Standard for Managed Stability (SMS) Guidelines for Northeast North Carolina (Carter 2014). Therefore, this cluster is expected to require Incidental Take due to project-related foraging habitat impacts.

No additional RCW groups will require Incidental Take due to group density or neighborhood-level impacts. A biological conclusion of **May Affect**, **Likely to Adversely Affect** was reached for this species.

Formal Section 7 Consultation with USFWS will be required for the RCW. A Biological Assessment (BA) has been completed and was submitted to USFWS so that a Biological Opinion (BO) can be rendered for the species. The BA/BO process will be completed prior to project construction letting and any conservation measures recommended by USFWS in their BO will be employed.

As compensation for impacts to TYR Cluster 63, one (1) credit will be debited from NCDOT's conservation credits at Palmetto-Peartree Preserve; post-project, 22 conservation credits will remain.

West Indian Manatee

Suitable habitat for the West Indian manatee is present within the study area in the Alligator River. A review of the NCNHP records, updated July 2018, indicates no known occurrences within 1.0 mile of the study area. The Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters (USFWS, 2003) will be implemented for this project to

ensure no adverse effects occur to this species. A biological conclusion of **May Affect**, **Not Likely to Adversely Affect** was reached for this species.

Atlantic Sturgeon

The mainstem of the Alligator River may offer suitable habitat for the sturgeon within the study area. Some canals and ditches in the study area may be adequate to support smaller anadromous species, such as river herring, but are unlikely to provide habitat for the Atlantic sturgeon. NCNHP records document EO 38940, the northern NC range of Atlantic sturgeon, within the study area. Based on available information and communication with NOAA Marine Fisheries on January 7, 2021, the Biological Conclusion for Atlantic sturgeon is **May Affect**, **Not Likely to Adversely Affect** due to lack of known occurrences.

Shortnose Sturgeon

The mainstem of the Alligator River may offer suitable habitat for the sturgeon within the study area. Some canals and ditches in the study area may be adequate to support smaller anadromous species, such as river herring, but are unlikely to provide habitat for the shortnose sturgeon. NCNHP records document no occurrences of shortnose sturgeon within the Alligator River. The closest NCNHP record is a historical occurrence in Albemarle Sound approximately 4 miles north of the project. Based on available information and communication with NOAA – Marine Fisheries on January 7, 2021, the Biological Conclusion for shortnose sturgeon is **May Affect, Not Likely to Adversely Affect** due to lack of known occurrences.

Response to Question 6 – Section 4(f)

The Lindsay C. Warren Bridge (Tyrrell County Bridge No. 7) is eligible for the National Register of Historic Places (NRHP) as an early example of the use of welding as a method of construction for long-span application of welder girders in the state of North Carolina. It is protected under Section 106 of the National Historic Preservation Act and Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966.

The HB-0001 bridge replacement project will have an adverse effect on Bridge No. 7 because it will be demolished. FHWA consulted with the North Carolina State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) in compliance with Section 106. A Memorandum of Agreement (MOA) was signed, outlining measures to be carried out, and is included in **Appendix A**. Bridge No. 7 has been documented in accordance with the MOA and will be included in the Historic Bridges of North Carolina website. Coordination with SHPO is ongoing (see Project Commitments Page).

FHWA has established a regulatory provision for Section 4(f) approval when a historic bridge is adversely affected by a proposed project under Section 106. A copy of the FHWA Section 4(f) Programmatic Evaluation for Historic Bridges is included in **Appendix A**.

Response to Question 8 – Anadromous Fish Spawning Waters

Anadromous fish habitat has been identified within the study area. The Alligator River north of the existing U.S. 64 bridge (30-16-21.5) is classified as coastal Anadromous Fish Spawning Area (AFSA) under Marine Fisheries Commission (MFC) jurisdiction. The Alligator River south of the existing U.S. 64 bridge (reach 30-16-7) is classified as joint AFSA waters under the jurisdiction of MFC and the North Carolina Wildlife Resource Commission (WRC). No Primary Nursery Areas have been identified within the study area. An in-water construction moratorium from February 15 to October 31 will apply to this project.

Response to Question 9 – Water Resources

The Alligator River has been designated as an Outstanding Resource Water (ORW) from the mouth of Northwest Fork to U.S. 64, south of the existing bridge. The North Carolina 2018 Final and 2020 draft Clean Water Act Section 303(d) lists of impaired waters identify the Alligator River 30-16-(7) as an impaired water for Legacy Category 5 Total Metals Assessment.

SAV surveys conducted in May 2021 did not identify SAV within the study area; however, because the project is currently unfunded for Right of Way and construction in the 2020-2029 STIP, re-surveys may be required at a future, appropriate time prior to the permitting and construction phase if a considerable amount of time elapses.

Response to Question 11 –USACE Individual Section 404 Permit

Although the USACE has yet to make a final determination, NCDOT believes a Section 404 Individual Permit may not be required from the USACE; and they may issue a General Permit 31 instead.

Response to Question 13 – Section 106 of the National Historic Preservation Act

Construction for the Lindsay C. Warren Bridge was completed in 1962. The bridge was determined eligible for listing in the NRHP during the 2005 NCDOT Historic Bridge Inventory. The bridge is eligible for the NRHP under Criterion C as an early example of the use of welding as a method of construction for long-span application of welder girders in the state of North Carolina.

The Alligator River Bridge Replacement project proposes to replace the Lindsay C. Warren Bridge, thereby resulting in an "Adverse Effect on Historic Properties" finding by FHWA.

SHPO concurred with FHWA's finding on June 24, 2021 (see **Appendix A**)

Response to Question 14 – GeoEnvironmental Sites of Concern

One site of concern, the Alligator River Marina on the western bridge approach in Tyrrell County, was identified within the proposed study area. The Alligator River Marina operates a convenience store and gas station at this location. According to the regulatory database, there are five underground storage tanks registered to this address. An incident is associated with the parcel when the site operated as Split Second (Eastern Fuels). That incident was officially closed out in February of 2010. The 11 monitoring wells associated with the incident were abandoned in April 2010.

Low budgetary and scheduling impacts resulting from this site are anticipated. Discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The NCDOT GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

Sites of concern identified in the GeoEnvironmental Phase I Report should be reviewed by the GeoEnvironmental Section once the Final Right of Way plans are complete to determine if Phase II Investigations and Right of Way Recommendations are necessary prior to right of way being acquired.

Response to Question 15 – Floodplain

The proposed project is within FEMA Regulated Zone AE with the Atlantic Ocean as the flooding source. Since the flooding source is coastal, there is no regulatory floodway within the project limits. Additionally, since the flood source is coastal, this project should not adversely affect the Base Flood Elevations.

Response to Question 16 – Coastal Area Management Act (CAMA)

The study area is located within the Estuarine and Ocean System Area of Environmental Concern (AEC). The Alligator River, as well as portions of Tributaries TA, TB, and TD are designated as Estuarine Waters and Public Trust Waters. Coastal Shorelines include all lands within 75 feet of the normal high-water level of estuarine waters and within 30 feet of the normal high-water level of public trust waters. Additionally, CAMA coastal wetlands are present at wetland sites WC, WN, WO, WP, and WQ, as detailed in the NRTR.

The proposed HB-0001 bridge structure is currently designed to span the public trust water shoreline buffers (30-foot and 75-foot buffer zones) on each side of the Alligator River. Additional structural, geotechnical, and hydraulic design will be performed in the final design phase to further evaluate the proposed bridge structure length to minimize the currently anticipated impacts to jurisdictional wetlands and streams and CAMA AEC associated with the project.

Response to Question 17 – US Coast Guard (USCG) Permit

The Alligator River has been designated by the USACE as a Navigable Water under Section 10 of the Rivers and Harbors Act. A Navigational Impact Report is being prepared and coordination with the USCG has been initiated by the Project Team. As part of this effort, the minimum horizontal and vertical clearances for the navigational channel will be developed in coordination with the USCG and a Coast Guard Bridge Permit will be required.

Response to Question 25 – Public Trust Resources

Public Trust Resources in the project study include:

- Alligator River National Wildlife Refuge
- NC WRC Alligator River Game Lands
- Palmetto-Peartree Preserve (Conservation Fund-owned property)
- NC WRC Boat Access
- NC Waterfront Access Marine Industry Fund (WAMI) Site

Alignment shifts were made to the western roadway approach to avoid impacts to the Alligator River Game Lands south of existing U.S. 64, which are a Designated Nature Preserve, as well as the WAMI site. The alignment on the eastern approach was also shifted during the R-2544/R-2545 Merger CP4A meeting to avoid impacting the Alligator River National Wildlife Refuge and the NC WRC public boat access on Old Ferry Landing Road.

In addition, four roadway approach alignment alternatives were developed on the western approach in Tyrrell County to minimize impacts to the Palmetto-Peartree Preserve parcel, located on the north side of existing U.S. 64 and owned by The Conservation Fund. NCDOT, in coordination with the Merger Team, selected Alternative 3 as the Preferred Alignment Alternative for the western approach because it resulted in the greatest balance between impacting the Palmetto-Peartree Preserve and providing a safe roadway for the traveling public.

Because Alternative 3 resulted in an estimated 1.2 acres of right of way impact to the Palmetto-Peartree Preserve, continued coordination between NCDOT, The Conservation Fund, and the N.C. Division of Cultural Resources – Land and Water will occur during the final design and right of way acquisition phase of the project related to these anticipated impacts and the existing conservation easement on the Palmetto-Peartree Preserve parcel.

Response to Question 27 - Traffic Noise

Based on the HB-0001 Traffic Noise Report (TNR), the Preferred Alternative is predicted to result in two traffic noise impacts. Consideration for noise abatement measures was given to all impacted receptors. For the proposed project, no traffic noise abatement measures have been determined to be feasible and reasonable. Furthermore, temporary construction noise impacts may occur due to the proximity of noise-sensitive residential receptors to project construction activities. It is the recommendation of the TNR that reasonable efforts should be made to reduce exposure of noise-sensitive areas to temporary construction noise impacts. No noise abatement measures are likely for incorporation into the project design plans for the HB-0001 project. Additional noise studies will not be necessary unless design modifications occur, additional alternatives are considered, or substantial changes to 2045 Design Year traffic volumes are predicted such that traffic noise impacts need to be reconsidered.

Response to Question 28 – Farmlands

Farmlands located within the study area are classified as "Prime if Drained". Preliminary screening of farmland conversion impacts resulted in a total score of 55 out of 160 points, which is less than the 60-point threshold established by NRCS; therefore, no further analysis of farmland conversion impacts is required.

H. Project Commitments:

NCDOT PROJECT COMMITMENTS

STIP Project No. **HB-0001**Replace Bridge No. 7 over the Alligator River
Tyrrell and Dare Counties
Federal Aid Project No. NHPB-0001(156)
WBS Element 49475.1.1

FEMA Floodplains and Floodways (NCDOT Division 1, NCDOT Hydraulics Unit)

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

NC Floodplain Mapping Program (NCDOT Division 1, NCDOT Hydraulics Unit)

NCDOT will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state
agency for administering FEMA's National Flood Insurance Program, to determine the 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).

Public Involvement and Outreach (NCDOT Public Involvement, NCDOT Division 1, NCDOT PMU)

 Public engagement activities will be coordinated with NCDOT Public Involvement prior to completion of the final designs and right of way plans to ensure full and fair participation of all potentially affected communities in the transportation decision-making process.

<u>Dare County Schools</u> (NCDOT Division 1, NCDOT Roadway, NCDOT Traffic Safety Unit)

• Alex Chandler, the Dare County School Transportation Director, reported in a telephone interview on June 2, 2021, that one school bus operates on U.S. 64 within the project limits, turning around prior to the bridge using a "vee" area at the Old Ferry Landing Road intersection with U.S. 64. One bus turns around twice each school day (morning and afternoon).

During the final design phase of the project, NCDOT will evaluate design revisions that accommodate a bus turnaround in the vicinity of Old Ferry Landing Road, as well as provisions for continued turnaround access during construction.

GeoEnvironmental Sites of Concern (NCDOT GeoEnvironmental Unit)

 Sites of concern identified in the GeoEnvironmental Phase I Report should be reviewed by the NCDOT GeoEnvironmental Section once the Final Right of Way plans are complete to determine if Phase II Investigations and Right of Way Recommendations are necessary prior to right of way being acquired.

Outstanding Resource Water (NCDOT Division 1, NCDOT ECAP)

 The Alligator River has been designated as an Outstanding Resource Water (ORW) from the mouth of Northwest Fork to U.S. Highway 64, south of the existing bridge. Best Management Practices from Design Standards in Sensitive Watersheds will be employed.

<u>Wildlife Crossings</u> (NCDOT Division 1, NCDOT Roadway Design, NCDOT Roadside Environmental Unit)

• The proposed project includes two arched pipes (53"X41"), one located on each approach to the bridge, that are included to accommodate wildlife crossing the U.S. 64 corridor. Standard 4-to-5-foot directional fencing will be installed to direct wildlife to these pipes and to keep wildlife from crossing the roadway where it could potentially be struck by vehicular traffic. Herptile-excluding mesh will be attached to the fencing and will extend upwards a minimum of 2-feet and be buried 1-foot below ground to prevent small animals, reptiles, and amphibians from breaching the wildlife fence and entering the U.S. 64 travel way.

Fencing 10-feet in height will be provided in the area around the end of the bridge on both approaches, and along both the northern and southern sides of U.S.64, to prevent larger animals from gaining access to the U.S. 64 corridor. The fencing will extend underneath the bridge to provide a continuous length of fencing.

Access gates in the wildlife fencing will be installed at appropriately designated intervals to allow for maintenance and ease of access once the wildlife fencing is installed.

Anadromous Fish Habitat (NCDOT Division 1, NCDOT ECAP)

The Alligator River north of the existing US 64 bridge (30-16-21.5) is classified as coastal
Anadromous Fish Spawning Area (AFSA) under Marine Fisheries Commission (MFC) jurisdiction.
The Alligator River south of the existing US 64 bridge (30-16-7) is classified as joint AFSA waters
under the jurisdiction of MFC and the North Carolina Wildlife Resource Commission (WRC). A
construction moratorium from February 1 to October 31 will apply to this project.

Submerged Aquatic Vegetation (NCDOT Division 1, NCDOT ECAP)

Submerged aquatic vegetation (SAV) surveys conducted in May 2021 did not identify SAV within
the study area; however, because the project is currently unfunded for Right of Way and
construction in the 2020-2029 STIP, re-surveys may be required at a future, appropriate time prior
to the permitting and construction phase if a considerable amount of time elapses.

Estuarine and Ocean System Area of Environmental Concern (AEC) (NCDOT Division 1, NCDOT ECAP, NCDOT Structures Management Unit, NCDOT Hydraulics Unit)

• The proposed HB-0001 bridge structure is currently designed to span the public trust water shoreline buffers (30-foot and 75-foot buffer zones) on each side of the Alligator River. Because this bridge is a coastal/tidal bridge with a high criticality rating, additional structural, geotechnical, and 2D hydrodynamic modeling and design efforts are being conducted to address, among other items, sea level rise (2090), storm surge, coastal scour, and wave loads. These design efforts will further evaluate and assist in determining the optimal length for the new bridge structure and pier locations and will seek to avoid and minimize, to the extent practicable, impacts to adjacent jurisdictional wetlands, streams, and CAMA AECs.

West Indian Manatee (NCDOT Division 1, NCDOT ECAP)

 Construction contracts will require compliance with the US Fish & Wildlife Service's Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters (USFWS, 2003) to ensure no adverse effects occur to this species.

Atlantic and Shortnose Sturgeon (NCDOT Division 1, NCDOT ECAP)

Conservation measures for the project to protect shortnose sturgeon include no hopper dredging
and measures to minimize habitat degradation. Such measures include Best Management
Practices (BMPs) involving use, storage, and disposal of construction/demolition materials to
minimize short-term turbidity or water quality degradation during over-water construction over the
Alligator River and during periodic maintenance. In addition, the project will incorporate BMPs to
reduce habitat degradation from stormwater runoff pollution. The same conservation measures will
be applied to the Atlantic sturgeon.

Black Rail (NCDOT Division 1, NCDOT ECAP)

 Informal Section 7 Consultation with USFWS will be required for the black rail, which has been assigned a Biological Conclusion of "May Affect, Not Likely to Adversely Affect." Consultation will occur and concurrence will be received from USFWS prior to project construction letting.

Red-cockaded woodpecker (NCDOT Division 1, NCDOT ECAP, NCDOT EPU)

Formal Section 7 Consultation with USFWS will be required for the red-cockaded woodpecker. A
Biological Assessment (BA) has been completed and was submitted to USFWS so that a Biological
Opinion (BO) can be rendered for the species. The BA/BO process will be completed prior to
construction Let and any conservation measures recommended by USFWS in its BO will be
employed on this project.

As compensation for impacts to Tyrell County (TYR) Cluster 63, one (1) credit will be debited from NCDOT's conservation credits at P3; post-project, 22 conservation credits will remain.

<u>Waterfront Access Marine Industry (WAMI) Fund Site</u> (NCDOT Division 1, NCDOT ECAP, NCDOT EPU)

• In Tyrrell County on the south side of U.S. 64, a rock jetty with bulkhead, 10 boat slips, and unpaved parking is located within NCDOT right-of-way. This small facility supporting commercial fishing was constructed using funding from the Waterfront Access Marine Industry (WAMI) Fund. The WAMI program was established by the N.C. General Assembly to ensure existing and future waterfront-dependent uses. The WAMI site is operated by a waterman's association whose members pay dues to the association for access and maintenance of the site. The project is not anticipated to directly impact the facility; however, plans for demolition of the existing bridge have not yet been developed, and, therefore, proposed temporary construction easements are not yet known.

If demolition plans will impact the WAMI site, they should be coordinated with the waterman's association (Aron Gallop, -252-394-5185) prior to completion of final designs and right-of-way plans.

Section 106 Memorandum of Agreement (NCDOT HUE, NCDOT SMU, NCDOT PMU, Division 1)

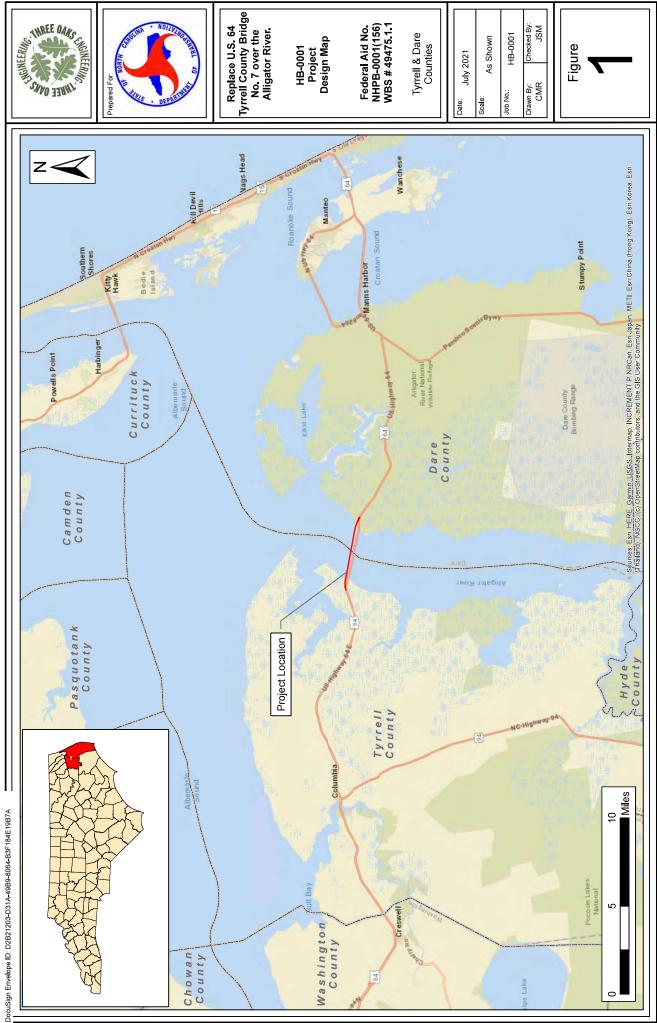
• A Section 106 Memorandum of Agreement (MOA) has been signed by NCDOT, FHWA, and the state historic preservation office (SHPO) that addresses the impacts to the existing Lindsay C. Warren Bridge, which has been determined eligible for listing in the National Register of Historic Places. Mitigation efforts outlined in the MOA include two-bar metal rail for the replacement structure, four stand-alone decorative panels and support structures, and photographic recordation of the existing bridge. Continued coordination with SHPO on these mitigation measures will occur as the project moves into the final design phase.

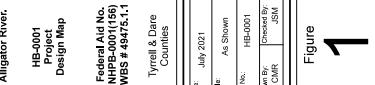
I. Categorical Exclusion Approval:

STIP Project No.	HB-0001
WBS Element	49475.1.1
Federal Project No.	NHPB-0001(156)
Prepared By:	CocuSigned by:
8/31/2021	Craig M. Young
Date	Craig M. Young, PE, NEPA Group Lead Three Oaks Engineering, Inc.
Prepared For:	North Carolina Department of Transportation
Reviewed By: 8/31/2021 Date	Colin Mellor, Eastern Regional Team Lead North Carolina Department of Transportation – Environmental Policy Unit
Approve	ed
✓ Certifie	If classified as Type III Categorical Exclusion.
	John G. Conforti, REM, Senior Project Manager North Carolina Department of Transportation – Project Management Unit
FHWA Approved: F	or Projects Certified by NCDOT (above), FHWA signature required.
8/31/2021	DocuSigned by: SHU Wildler B34ADF9A292349B
	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).

FIGURES











HB-0001 Project Design Map

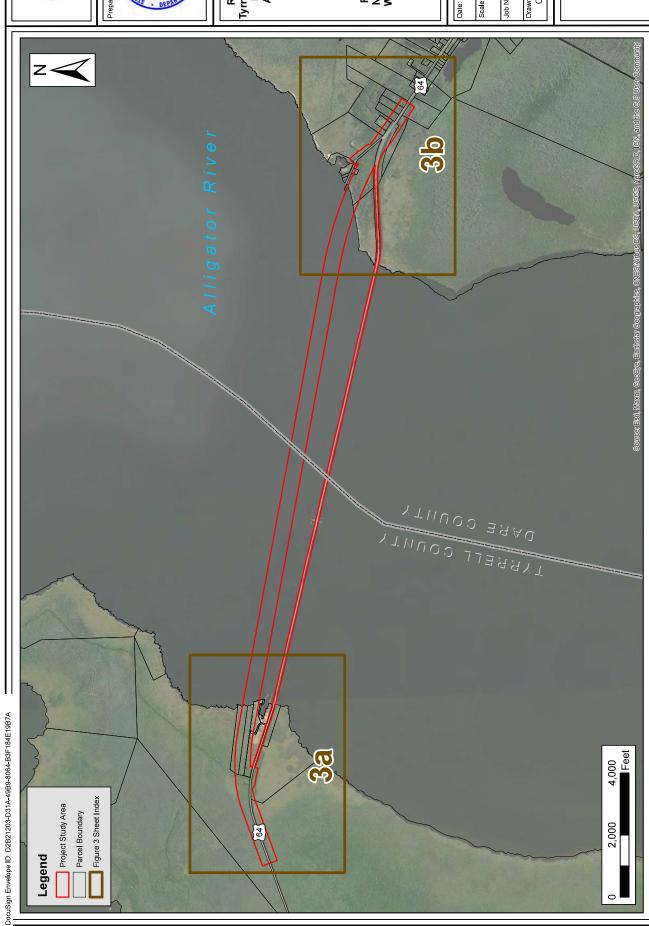
Federal Aid No. NHPB-0001(156) WBS # 49475.1.1

Tyrrell & Dare Counties

HB-0001 As Shown July 2021

Checked By: JSM

Figure







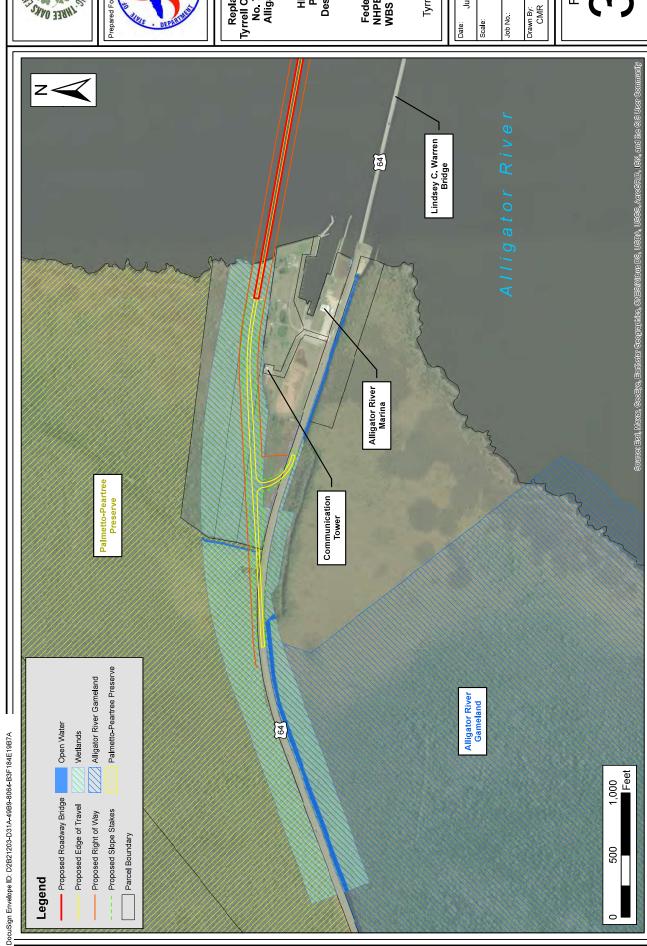
HB-0001 Project Design Map

Federal Aid No. NHPB-0001(156) WBS # 49475.1.1

Tyrrell & Dare Counties

Checked By: JSM As Shown HB-0001 July 2021 Drawn By: CMR Job No.: Scale: Date:

Figure C







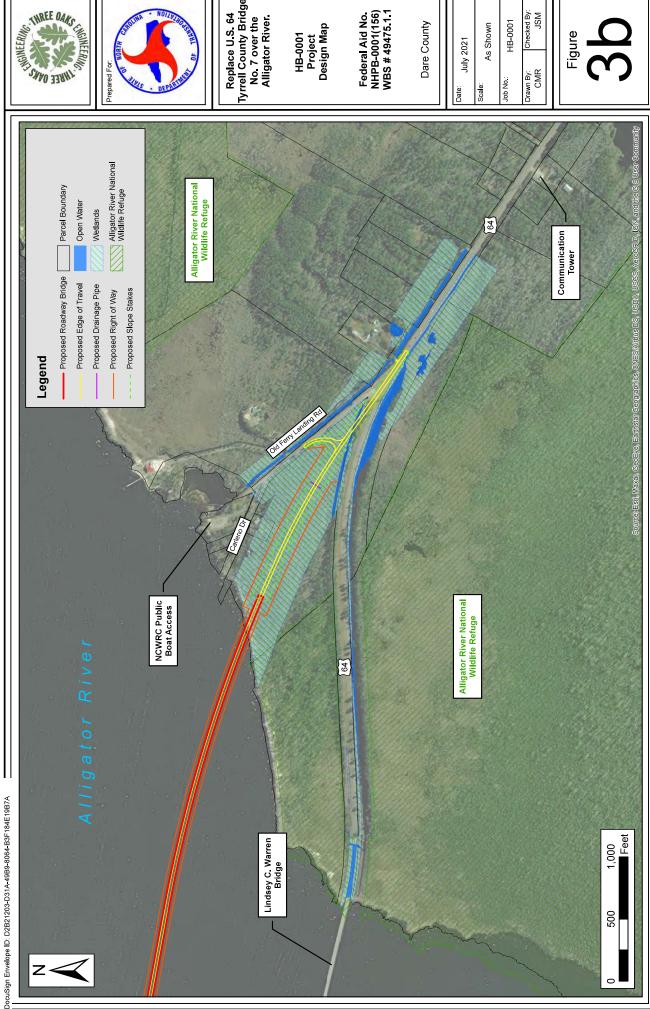
HB-0001 Project Design Map

Federal Aid No. NHPB-0001(156) WBS # 49475.1.1

Tyrrell County

Checked By: JSM As Shown HB-0001 July 2021

Sigure C







HB-0001 Project Design Map

Federal Aid No. NHPB-0001(156) WBS # 49475.1.1

Dare County

Checked By: JSM As Shown HB-0001 July 2021

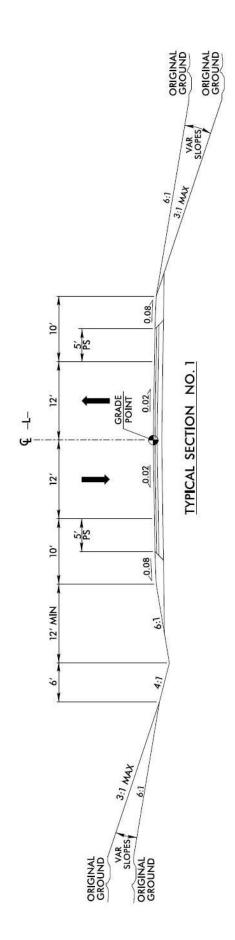
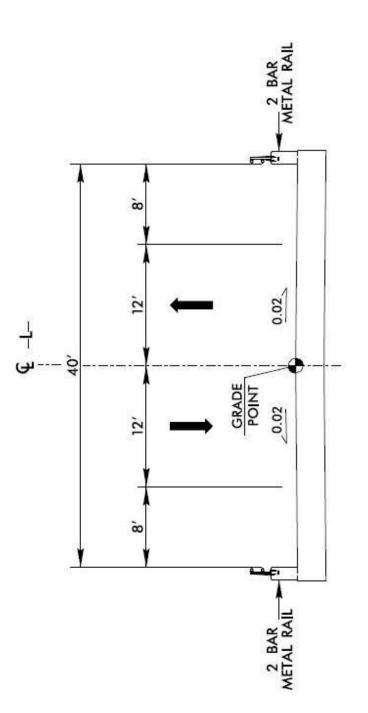


Figure 4 - Roadway Approaches



TYPICAL SECTION NO. 2

Figure 5 - Bridge Deck

APPENDIX A



North Carolina Division

May 11, 2021

310 New Bern Avenue, Suite 410 Raleigh, North Carolina 27601 (919) 856-4346 (919) 747-7030 www.fhwa.dot.gov/ncdiv

> In Reply Refer To: HDA-NC

Renee Gledhill-Earley Environmental Review Coordinator State Historic Preservation Office 109 E Jones St MSC 4617 Raleigh, NC 27699

Subject:

Re-Initiation of Section 106 Consultation for the Proposed Widening of US 64 from 0.9 Miles East of Columbia to US 64 near Manns Harbor and Replacement of the Existing Tyrell County Bridge No. 7 (Lindsay C. Warren Bridge) in Tyrell and Dare Counties Project (STIP No. R-2544/R-2545), now known as the Alligator River Bridge Replacement Project (STIP No. HB-0001)

Dear Ms. Gledhill-Early:

The U.S. Army Corps of Engineers (USACE) previously consulted with your office regarding the Proposed Widening of US 64 from 0.9 Miles East of Columbia to US 64 near Manns Harbor and Replacement of the Existing Tyrell County Bridge No. 7 (Lindsay C. Warren Bridge) in Tyrell and Dare Counties Project (STIP No. R-2544/R-2545), henceforth referred to as the Proposed Widening of US 64 in Tyrell and Dare Counties Project. This letter serves as a re-initiation of that earlier consultation in order to reflect changes in both the overall project description and in the lead federal agency. In compliance with Section 106 of the National Historic Preservation Act (NHPA), as amended, the Federal Highway Administration (FHWA) – as the new lead federal agency for the project – has taken into account the potential effects of the revised project on historic properties and is affording your office an opportunity to comment on the undertaking and FHWA's findings.

Previous Section 106 Consultation

Your office concurred on October 21, 2009, that the Proposed Widening of US 64 in Tyrell and Dare Counties Project would result in "Adverse Effect on Historic Properties." The project proposed to replace the Lindsay C. Warren Bridge, which was determined eligible for listing in the National Register of Historic Places (NRHP). The project also proposed to impact the East Lake Methodist Church and Cemetery and East Lake Fire Tower, which were determined eligible for listing in the NRHP.

In a letter dated October 8, 2014, the USACE notified the Advisory Council on Historic Preservation (ACHP) that the Proposed Widening of US 64 in Tyrell and Dare Counties Project would result in an "Adverse Effect on Historic Properties." In a letter dated December 1, 2014, the ACHP responded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of their regulations, "Protection of Historic Properties" (36 CFR Part 800), did not apply to this undertaking.

Subsequently, the USACE, North Carolina Department of Transportation (NCDOT), and North Carolina State Historic Preservation Officer (SHPO) signed a Memorandum of Agreement (MOA) outlining stipulations to account for the effects of the undertaking, which was signed on June 2, 2016.

Summary of Change to Undertaking

In the time since the MOA was signed in 2016, NCDOT has decided not to proceed with the widening of US 64 from 0.9 Miles East of Columbia to US 64 near Manns Harbor at this time; and instead will only replace the existing, structurally deficient two-lane Lindsay C. Warren Bridge (Tyrell County Bridge No. 7) with a new two-lane, high-level, fixed-span bridge. The proposed undertaking is now referred to as the Alligator River Bridge Replacement Project (STIP No. HB-0001). The USACE was the lead federal agency for the original Proposed Widening of US 64 in Tyrell and Dare Counties Project because the project was funded with state dollars. The revised bridge replacement project is now anticipated to include use of federal funds. As a result, FHWA is now serving as lead federal agency for the Alligator River Bridge Replacement Project.

Revised Area of Potential Effect (APE)

The Area of Potential Effects (APE) for the proposed Alligator River Bridge Replacement Project begins in Tyrrell County approximately one mile west of the edge of the Alligator River along US 64. The APE continues north of the existing bridge approximately 4.8 miles and ends in Dare County approximately 0.7 miles west of the edge of Alligator River. The width of the APE is 1,600 feet and includes the existing bridge. The new bridge location ranges from 750 feet to 1,400 feet from the existing bridge (see Figure 1). The APE for HB-0001 is entirely contained within the APE for the Proposed Widening of US 64 in Tyrell and Dare Counties Project.

Historic Properties Identification

The Lindsay C. Warren Bridge (Tyrell County Bridge No. 7) was determined eligible for the NRHP during the 2005 NCDOT Historic Bridge Inventory. It was determined eligible under Criterion C as an early example of the use of welding as a method of construction for long-span application of welder girders in the state of North Carolina.

The East Lake Methodist Church and Cemetery and East Lake Fire Tower are outside the revised APE of the proposed Alligator River Bridge Replacement Project.

Effects Finding

The Alligator River Bridge Replacement Project proposes to replace the Lindsay C. Warren Bridge, which was determined eligible for listing in the NRHP. Therefore, the Alligator River Bridge Replacement Project would result in an "Adverse Effect on Historic Properties."

Conclusions

FHWA is re-initiating Section 106 consultation for the Alligator River Bridge Replacement Project, which has changed since the original Section 106 consultation with your office in 2016 when it was known as the Proposed Widening of US 64 in Tyrell and Dare Counties Project. FHWA is now the lead federal agency for Section 106 compliance for the project. As such, FHWA has reviewed project changes that have occurred since the original consultation in which USACE served as lead federal agency; revised the APE accordingly; identified historic properties potentially affected; and assessed effects to those properties. In doing so, FHWA finds that the original finding of "Adverse Effect to Historic Properties" remains unchanged.

FHWA looks forward to continued coordination with your office to develop a new Memorandum of Agreement (MOA) that will provide for commensurate mitigation for the adverse effect to the existing bridge. The Lindsay C. Warren Bridge, by virtue of being NRHP-eligible, is considered a Section 4(f) resource. FHWA anticipates use of its *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* to satisfy USDOT regulations.

The FHWA NC Division office requests your concurrence with the effects findings detailed above. If you have any additional comments or concerns regarding the undertaking within 30 days of receipt of this letter, please contact me at: seth.wilcher@dot.gov. If no response is received within 30 days, we will assume you have no comments or concerns regarding the undertaking and are in agreement with our above determinations, in accordance with 36 CFR 800.5(c)(1).

Sincerely,

Seth Wilcher

Preconstruction and Environment Specialist

I concur with the FHWA's finding of effect as described in this letter. Further, I understand that FHWA intends to apply its Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges to meet USDOT Section 4(f) regulations.

Renee Gledhill-Earley, NC Historic Preservation Office Date



Figure 1. Area of Potential Effects for HB-0001

MEMORANDUM OF AGREEMENT AMONG THE FEDERAL HIGHWAY ADMINISTRATION, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, AND

NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER FOR

REPLACEMENT OF TYRRELL COUNTY BRIDGE NO. 7 ON US 64
OVER THE ALLIGATOR RIVER IN TYRRELL AND DARE COUNTIES
NORTH CAROLINA
NCDOT TIP HB-0001
FEDERAL AID PROJECT NO. NHPB-0001(156)

WHEREAS, the Federal Highway Administration (FHWA) has determined that Transportation Improvement Project HB-0001 - the replacement of the structurally deficient, two-lane Tyrrell County Bridge No. 7/Lindsey C. Warren Bridge on US 64 over the Alligator River in Tyrrell and Dare Counties (the Undertaking) will have an adverse effect upon Bridge No. 7, a swing-span bridge determined eligible for listing in the National Register of Historic Places (NRHP) (historic property); and

WHEREAS, the FHWA has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the U.S. Army Corps of Engineers (USACE) entered into a Memorandum of Agreement (MOA) with the SHPO and North Carolina Department of Transportation (NCDOT) on June 2, 2016, for the Proposed Widening of US 64 from 0.9 Miles East of Columbia to US 64 near Manns Harbor (R-2544/R-2545) and Replacement of Bridge No. 7 (HB-0001) in Tyrell and Dare Counties; and

WHEREAS, since the signing of the 2016 MOA, NCDOT has decided to only proceed with HB-0001; and

WHEREAS, the funding for the Undertaking has changed from state to federal, making FHWA the lead federal agency; and

WHEREAS, NCDOT has participated in the consultation and been invited by FHWA and the SHPO to be a signatory to this MOA; and

WHEREAS, FHWA has notified the Advisory Council on Historic Preservation (Council) of the adverse effect and the Council has declined to comment or participate in the consultation,

NOW, THEREFORE, FHWA, NCDOT, and the North Carolina SHPO, agree that the Undertaking shall be implemented in accordance with the following stipulations to take into account the effects of the Undertaking on the historic property.

STIPULATIONS

The FHWA and NCDOT will ensure that the following measures are carried out:

I. Photographic Recordation

Prior to the initiation of construction, NCDOT will record the existing conditions of the Tyrrell County Bridge No. 7/Lindsey C. Warren Bridge in accordance with the attached Historic Structures and Landscape Recordation Plan (Appendix A). The SHPO will have ten (10) days in which to comment on the adequacy of the recordation. If the SHPO does not respond within the ten (10) days, the documentation will be considered acceptable. Copies of the documentation will be deposited in the files of the North Carolina Historic Preservation Office (NCHPO) and NCDOT's Historic Architecture Group.

II. Design of Replacement Structure and Decorative Panels

NCDOT will ensure the following elements are incorporated into the design and construction of the new bridge:

- 1. Two-bar metal rail.
- 2. Four stand-alone, decorative panels and their support structures, placed within the bridge approaches at the four corners of the bridge and behind the guardrail, the specifications for these are as follows:
 - a. Each panel shall be no smaller than the four feet by five feet.
 - b. The panels shall be made of stainless steel or other material that is easily maintained and durable.
 - c. The panels shall be traffic-facing.
 - d. Each panel shall feature a unique artistic rendering of the animals found in the Alligator River Wildlife Refuge or surrounding area for which NCDOT has taken or will take extra measures to protect them and/or their habitat.
 - e. The design, materials, and installation of the panels and support structures will be in keeping with NCDOT's current public art policy.
 - f. The NCDOT Project Manager will coordinate with HPO and the USFWS's Alligator River National Wildlife Refuge on the artwork for the panels.
 - g. Draft artwork, renderings, and plans shall be reviewed and agreed upon by the signatories prior to approval of the final panel artwork, manufacture, and installation of the panels.

III. Unanticipated Discoveries

A. In accordance with 36 CFR 800.11(a), if NCDOT identifies additional cultural resource(s) during construction and determines them to be eligible for the NRHP, all work shall halt within the limits of the NRHP-eligible resource(s) and the FHWA and North Carolina SHPO contacted. If after consultation with the Signatories additional mitigation is determined necessary, the NCDOT, in consultation with the Signatories, will develop and implement appropriate protection/mitigation measures for the resource(s).

B. Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

IV. Dispute Resolution

Should any of the Parties to this Agreement object within (30) days to any plans or documentation provided for review pursuant to this MOA, the FHWA shall consult with the objecting party(ies) to resolve the objection. If the FHWA or the objecting party(ies) determines that the objection cannot be resolved, the FHWA will forward all documentation relevant to the dispute to the Council. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

- 1. Provide the FHWA with recommendations, which the FHWA will take into account in reaching a final decision regarding the dispute, or
- 2. Notify the FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR Section 800.7(c)(4) with reference to the subject of the dispute.

Any recommendations or comments provided by the Council will be understood to pertain only to the subject of the dispute; the FHWA's responsibility to carry out all the actions under this agreement that are not the subject of the dispute will remain unchanged.

V. Amendments

Should any of the Signatories to this MOA believe that its terms cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other party(ies) to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation IV will be followed.

VI. Termination

Any of the Signatories may terminate the MOA by providing notice to the other parties, provided that the parties consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

VII. Duration

Unless terminated pursuant to Stipulation VI above, this MOA will be in effect until FHWA, in consultation with the other Signatories, determines that all its terms have satisfactorily been fulfilled or if NCDOT is unable or decides not to construct the Undertaking.

Execution of this MOA by FHWA, NCDOT, and the North Carolina SHPO, its subsequent filing with the Council and implementation of its terms is evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking, and that FHWA has taken into account the effects of the Undertaking on the historic property.

AGREE:

Federal Highway Administration

By: Olane W. Oleno J. for John F. Sullivan III, P.E.

Date: ___8/31/2021

Division Administrator

AGREE:

North Carolina State Historic Preservation Officer

By:

Date: 8/30/2021

Ramona Bartos

Deputy State Historic Preservation Officer

AGREE:

North Carolina Department of Transportation		
By: Philip S. Harris III	Date:	8/31/2021
Phillip S. Harris, P.E.	-	
Environment Analysis Unit Head		
North Carolina Department of Transportation		

FILED:		
By:	Date:	
Advisory Council on Historic Preservation		

APPENDIX A

Historic Structures and Landscape Recordation Plan For The Replacement of Tyrrell County Bridge No. 7 Tyrrell County North Carolina NCDOT TIP HB-0001

Photographic Requirements

- Representative pictures of the Tyrrell County Bridge No. 7/ Lindsay Warren Bridge
 including elevation and oblique views of the swing span, mechanics of the wingspan,
 and the controller booth.
- Drone photographs showing the bridge within its setting and details of the swing span, its mechanics, and operator's booth seen from above the river, itself.

Photographic Format

- Color digital images (all views) shot with a SLR digital camera with a minimum resolution of 6 megabyte pixels, at a high quality (preferably RAW) setting, to be saved in TIF format as the archival masters and labeled according to the State Historic Preservation Office standards.
- Drone photographic standards if different from above
- File names for each image should follow the format:

SS# ResourceName DateofPhoto InitialsofPhotog-FrameNo.tif.

- Printed inventory (photolog) of the images should be provided as a table with the file name and description for each image – including subject, location, date, and photographer information for each image.
- Contact sheets should be printed on premium quality, bright white paper (24lb) or photo paper with a maximum of nine images per sheet. The back of the contact sheet should have the following information written in archival black ink.

NCDOT TIP#

NCHPO ER#

NCDOT Photorecordation for MOA

Survey Site Number and Name of Property

Road Name

Vicinity or Town

County

Photographer's Name and Date of Photography

- A labeled map with a key to the shots and photographs should be included in the documentation.
- The individual images, photolog, and map should be saved electronically on compact disc labeled similar to the contact sheets.

Copies and Curation

• One (1) set of all above mentioned photographic documentation, including the compact disc of labeled images, will be deposited with the North Carolina Office of

- Archives and History/Historic Preservation Office to be made a permanent part of the statewide survey and iconographic collection.
- One (1) set of contact sheets shall be deposited in the files of the NCDOT's Historic Architecture Group.

NORTH CAROLINA DIVISION FINAL PROGRAMMATIC SECTION 4(f) EVALUATION AND APPROVAL FOR FEDERALLY-AIDED HIGHWAY PROJECTS THAT NECESSITATE THE USE OF HISTORIC BRIDGES

F. A. Project NHPB-0001(156) W.B.S. No. 49475.1.1 TIP No. HB-0001

Description:

NCDOT proposes to replace the existing, structurally deficient two-lane Lindsay C. Warren Bridge (Tyrell County Bridge No. 7) with a new two-lane, high-level, fixed-span bridge on new alignment. The existing 2.8-mile long swing-span bridge is experiencing substantial deterioration due to its age and structural deficiencies resulting in ongoing maintenance problems, jeopardizing its ability to provide a reliable connection between Columbia and Manns Harbor, Manteo, and the Outer Banks.

The Lindsay C. Warren Bridge was completed in 1962. It was determined eligible for the National Register of Historic Places (NRHP) during the 2005 NCDOT Historic Bridge Inventory. The bridge is eligible for the NRHP under Criterion C as an early example of the use of welding as a method of construction for long-span application of welder girders in the state of North Carolina.

		<u>Yes</u>	<u>No</u>
1.	Is the bridge to be replaced or rehabilitated with Federal funds?	<u>X</u>	
2.	Does the project require the use of a historic bridge structure which is on or eligible for listing on the National Register of Historic Places?	<u>X</u>	
3.	Is the bridge a National Historic Landmark?		<u>X</u>
4.	Has agreement been reached among the FHWA, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) through procedures pursuant to Section 106 of the National Historic Preservation Act (NHPA)?	<u>X</u>	

ALTERNATIVES CONSIDERED AND FOUND NOT TO BE FEASIBLE AND PRUDENT

The following alternatives were evaluated and found not to be feasible and prudent:

1.	Do nothing	
	Does the "do nothing" alternative:	V N-
	(a) correct the problem situation that caused the bridge to be considered deficient?	$\begin{array}{c c} \underline{Yes} & \underline{No} \\ \hline & \underline{X} \\ \end{array}$
	(b) pose serious and unacceptable safety hazards?	X

- 2. <u>Build a new structure at a different location without affecting the historic integrity of the structure.</u>
 - (a) The following reasons were reviewed: (circle, as appropriate)
 - (i) The present bridge has already been located at the only feasible and prudent site
- and/or (ii) Adverse social, environmental, or economic impacts were noted
- and/or (iii) Cost and engineering difficulties reach extraordinary magnitude
- and/or (iv) The existing bridge cannot be preserved due to the extent of rehabilitation, because no responsible party will maintain and preserve the historic bridge, or the permitting authority requires removal or demolition.
- 3. Rehabilitate the historic bridge without affecting the historic integrity of the structure.
 - (a) The following reasons were reviewed: (circle, as appropriate)

(i) The bridge is so structurally deficient that it cannot be rehabilitated to meet the acceptable load requirements and meet National Register criteria

and/or (ii) The bridge is seriously deficient geometrically and cannot be widened to meet the required capacity and meet National Register criteria

MINIMIZATION OF HARM

- 1. The project includes all possible planning to minimize harm.
- 2. Measures to minimize harm include the following: (circle, as appropriate)
 - a. For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements.
 - b. For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be removed or demolished, the FHWA ensures that, in accordance with the Historic American Engineering Record (HAER) standards, or other suitable means developed through consultation, fully adequate records are made of the bridge.
 - c. For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge.
 - d. For bridges that are adversely affected, agreement among the SHPO, ACHP, and FHWA is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project.
- 3. Specific measures to minimize harm are discussed below:

The FHWA and NCDOT will ensure that the following measures are carried out:

Photographic Recordation

Prior to the initiation of construction, NCDOT will record the existing conditions of the Tyrrell County Bridge No. 7/Lindsey C. Warren Bridge in accordance with the attached Historic Structures and Landscape Recordation Plan (Appendix A). The SHPO will have ten (10) days in which to comment on the adequacy of the recordation. If the SHPO does

not respond within the ten (10) days, the documentation will be considered acceptable. Copies of the documentation will be deposited in the files of the North Carolina Historic Preservation Office (NC HPO) and NCDOT's Historic Architecture Group.

Design of Replacement Structure and Decorative Panels

NCDOT will ensure the following elements are incorporated into the design and construction of the new bridge:

- 1. Two-bar metal rail.
- 2. Four stand-alone, decorative panels and their support structures, placed within the bridge approaches at the four corners of the bridge and behind the guardrail, the specifications for these are as follows:
 - a. Each panel shall be no smaller than the four feet by five feet.
 - b. The panels shall be made of stainless steel or other material that is easily maintained and durable.
 - c. The panels shall be traffic-facing.
 - d. Each panel shall feature a unique artistic rendering of the animals found in the Alligator River Wildlife Refuge or surrounding area for which NCDOT has taken or will take extra measures to protect them and/or their habitat.
 - e. The design, materials, and installation of the panels and support structures will be in keeping with NCDOT's current public art policy.
 - f. The NCDOT Project Manager will coordinate with HPO and the USFWS's Alligator River National Wildlife Refuge on the artwork for the panels.
 - g. Draft artwork, renderings, and plans shall be reviewed and agreed upon by the signatories prior to approval of the final panel artwork, manufacture, and installation of the panels.

Note: Any response in a box requires additional information prior to approval. Consult Nationwide 4(f) evaluation.

COORDINATION

The proposed project has been coordinated with the following (attach correspondence):

a.	State Historic Preservation Officer	_X_
b.	Advisory Council on Historic Preservation	X
c.	Local/State/Federal Agencies	X
d.	US Coast Guard	$\overline{\mathbf{X}}$
	(for bridges requiring bridge permits)	

SUMMARY AND APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on July 5, 1983.

All required alternatives have been evaluated and the findings made are clearly applicable to this project.

There are no feasible and prudent alternatives to the use of the historic bridge. The project includes all possible planning to minimize harm, and there are assurances that the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed.

Approved:	
11	DocuSigned by:
8/31/2021	Phillip S. Harris III
	8C1643F6874A457
Date	Phillip S. Harris, P.E.
	Environment Analysis Unit Head, NCDOT Environmental Analysis Unit
	Cousigned by:
8/31/2021	Seth Wildher
	B34ADF9A202349B
Date	John F. Sullivan III, P.E.
	Division Administrator, FHWA



North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper

Secretary D. Reid Wilson

June 29, 2021

Kyle W. Barnes U.S. Army Corps of Engineers - Wilmington District Washington Regulatory Field Office 2407 West Fifth Street Washington, North Carolina 27889 kyle.w.barnes@usace.army.mil

RE: Improve US 64, E of Columbia to US 264, R-2544/R-2545 & replace bridge #7, HB-0001,

SAW-2021-0109, Dare and Tyrrell Counties, ER 06-2877

Dear Mr. Barnes:

We are in receipt of the Public Notice for the above-referenced undertaking. Having reviewed the information provided, we note that the replacement of Bridge #7 will adversely affect the bridge which has been determined eligible for listing in the National Register of Historic Places. However, there are no listed or eligible archaeological resources within the project area.

As you are aware there is an existing Memorandum of Agreement (MOA) to mitigate the adverse effect that an earlier and longer version of the undertaking would have on the historic bridge. We believe that an amendment to that MOA may be an appropriate avenue to address the project's change and additional mitigation for the loss of the historic bridge.

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

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

Sincerely,

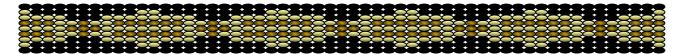
Ramona Bartos, Deputy

State Historic Preservation Officer

cc: John Conforti, NCDOT

Zener Bledhill-Earley

Craig Young, Three Oaks Mary Pope Furr, NCDOT jgconforti@ncdot.gov craig.young@threeoaksengineering.com mpfurr@ncdot.gov



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

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

April 8, 2021

Attention: John Conforti NC Department of Transportation 1582 Mail Service Center Raleigh, NC 27699-1582

Re. THPO# T

TCNS#

Project Description

2021-193-84

Replacement of Bridge No. 7 on US 64 over the Alligator River in Dare and Tyrrell

Counties as project HB-0001

Dear Mr. Conforti,

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

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire

Tribal Historic Preservation Officer

Cattle Rogers for