

PUBLIC NOTICE

Issue Date: March 14, 2019

Comment Deadline: April 12, 2019 Corps Action ID Number: SAW-2013-01883

STIP Nos. I-4400/I-4700

The Wilmington District, U.S. Army Corps of Engineers (Corps) has received an application from the North Carolina Department of Transportation (NCDOT) seeking Department of the Army authorization to permanently impact 14,831 linear feet of stream and 2.91 acres of wetland along 22.2 miles of I-26 from US 25, south of Hendersonville, to I-40/I-240, south of Asheville, to improve existing and projected roadway capacity deficiencies and improve insufficient pavement structure and deteriorating existing road surface conditions in Henderson and Buncombe Counties, North Carolina (STIP Nos. I-4400/I-4700).

Specific location information is detailed on the following pages of this Public Notice.

Construction plans are not attached to this Public Notice due to the large number of pages; however, all construction plans can be found at the Wilmington District Web Site along with this Public Notice: https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Public-Notices/

You can also view the construction plans at:

https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/I-4700%20I-4400%20Permit%20Drawings.pdf

If you wish to obtain or view a paper copy of this Public Notice and/or the plans, please contact the individual identified at the end of this Notice.

The Federal Highway Administration (FHWA) is the lead federal agency for this project. The FHWA's Combined Final Environmental Impact Statement (FEIS), Final Section 4(f) Evaluation, and Record of Decision (ROD) for this project are available on the NCDOT website at (https://www.ncdot.gov/projects/i26Widening/). You can also view project maps and other project-related information on this website. Additionally, links to specific documents and information are provided throughout this Public Notice.

Applicant: North Carolina Department of Transportation

Environmental Analysis Unit

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Authority

The Corps will evaluate this application and decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

☑ Section 404 of the Clean Water Act (33 U.S.C. 1344)
☑ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
☑ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

Location

The project is located in western North Carolina in the Mountain physiographic region beginning in southeastern Henderson County, just south of Hendersonville, and continuing west to southern Buncombe County, just south of Asheville. The project corridor is 22.2 miles in length and passes through the City of Hendersonville and the Town of Fletcher in Henderson County, and the southern portion of the City of Asheville in Buncombe County.

This project is included in the <u>2018 – 2027 State Transportation Improvement Program</u> (https://connect.ncdot.gov/projects/planning/STIPDocuments1/NCDOT%20Current%20STIP.pd f) (STIP) as two projects, I-4400 and I-4700. STIP Project I-4400 is 13.6 miles in length and begins at US 25 (Exit 54) near Hendersonville and extends along I-26 west to NC 280 (Exit 40). STIP Project I-4700 is 8.6 miles in length and extends along I-26 from NC 280 west to the I-40/I-240 interchange. For the remainder of this Public Notice, STIP Numbers I-4400 and I-4700 will be referred to as "the project."

Nearest Towns: (from south to north) City of Hendersonville, Town of Fletcher, and City of Asheville

Nearest Waterways: (from south to north) Dunn Creek, Devils Fork, Bat Fork, Allen Branch, Clear Creek, Mud Creek, Featherstone Creek, Byers Creek, Cane Creek, Kimsey Creek, French Broad River, Powell Creek, Ducker Creek, Hominy Creek

River Basin: French Broad

Latitude and Longitude: N 35.432347 W 82.530633

The project is located in Henderson (STIP I-4400) and Buncombe (STIP I-4700) Counties, North Carolina.

The length of the project along I-26 is approximately 22.2 miles.

I-26 is a major transportation route in western North Carolina and the southeastern United States for the movement of people and goods. I-26 is considered a west-to-east corridor and runs from Kingsport, Tennessee to Charleston, South Carolina. I-26 generally runs south-to-north in the project area.

The project study area (PSA) boundary for this project generally consists of a 1,400-foot wide corridor that follows existing I-26 from US 25 in Henderson County, north to I-40/I-240 in Buncombe County. The PSA boundary also encompasses interchanges that are included in this project and the Blue Ridge Parkway bridge over I-26.

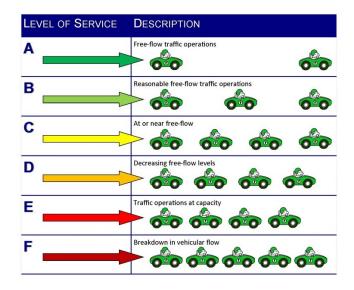
Existing Site Conditions

I-26 is a four-lane, median-divided, full control-of-access facility between US 25 (Exit 54) in Henderson County and I-40/I-240 (Exit 31) in Buncombe County. This section of I-26 also carries the US 74 designation. The project area includes eleven existing grade-separated crossings and eight existing interchanges. The speed limit varies from 65 miles per hour (mph) in southern Henderson County to 60 mph in northern Henderson County, into Buncombe County, and up to I-40/I-240.

I-26 interchanges with US 25, which serves the region as a north-south connection between Asheville, North Carolina and Greenville, South Carolina, and US 64, which serves the region as an east-west connection between I-77 in Statesville, NC, and I-75 near Chattanooga, Tennessee. The interchange of I-26 and I-40/I-240 in Buncombe County forms the center of the region's transportation system. These two freeways interconnect the region and carry the highest percentage of trips passing through the area, while their locations in proximity to populated areas, commercial areas, and the Asheville Regional Airport also serve a large portion of the local travel demands.

Due to its predominately south to north alignment in the PSA, I-26 serves south to north traffic through the region. With limited alternate south to north routes, automobile and truck-freight through traffic utilizing I-26 share the facility with local traffic, creating several areas of congestion during peak travel periods on I-26. The I-26 corridor in the PSA also experiences a seasonal increase in traffic volume during the summer and fall months as tourists visit the region for recreational activities and fall foliage viewing.

Current traffic volumes indicate that demand exceeds the available capacity of I-26 in Buncombe County (NC 280 [Airport Road] to I-40/I-240), with this segment of the roadway operating at Level of Service (LOS) F. LOS is a qualitative measure used to describe the operating conditions of a roadway. LOS is generally described in terms of factors such as speed, travel time, freedom to maneuver, traffic interruptions, driver comfort and convenience, and safety. LOS is represented by a letter ranking from "A" to "F", with "A" representing free flowing conditions and "F" representing traffic-breakdown conditions. Below is a visual representation of LOS from the March 2019 FHWA *Combined FEIS, Final Section 4(f) Evaluation, and ROD* (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/01_I4400-I4700_Final% 20EIS% 20Final% 20Section% 204(f)% 20ROD_FINAL_03052019.pdf):



The segment in Henderson County (US 25 to NC 280) is currently operating at an acceptable LOS D or better. Taking regional population and employment growth into account, the entire roadway corridor from US 25 to I-40/I-240 is projected to operate over capacity (LOS F) in 2040. According to NCDOT, I-26 currently carries substantial traffic volumes and is projected to carry higher traffic volumes in the future; therefore, the number of congestion-related crashes is expected to increase. The approximately 23-mile section of I-26 from the US 25 interchange in Henderson County to the I-40/I-240 interchange in Buncombe County experienced 2,072 crashes during the five-year time period of March 2011 through February 2016. This crash rate is below the statewide average for similar facility types, when considering total and non-fatal injury crash type categories, but above the statewide average for the fatal crash category. Approximately 66 percent of all crashes occur during the 11 a.m. to 7 p.m. timeframe.

The Blue Ridge Parkway bridge over I-26 is included in the PSA for this project; this bridge is located at Milepost 391.79 on the parkway. An average of 5,000 vehicles per day use this bridge during the visitor season. There is no direct access to I-26 from the Parkway.

Land use throughout the PSA is mixed, consisting of large sections of residential areas, commercial and industrial stretches, and agricultural tracts. Residential areas generally consist of single family homes on individual parcels or within subdivisions. Commercial development is largely concentrated near the I-26 interchanges with US 64 (Four Seasons Boulevard/Old Chimney Rock Road), US 25 (Asheville Highway), NC 280 (Airport Road), NC 146 (Long Shoals Road), and NC 191 (Brevard Road).

Water resources in the PSA are part of the French Broad river basins (US Geological Survey [USGS] Hydrologic Unit Codes [HUC] 06010105).

The French Broad River is a major feature in the region. It bisects Buncombe County and provides a water source for a large portion of the PSA. Due to the topography of the region, most other rivers, streams, and creeks flow into the French Broad River. The Hominy Creek watershed is located in southern Asheville and contains Hominy Creek and South Hominy Creek.

One hundred and seventy-five (176) perennial and intermittent streams, one hundred and fifty-eight (158) wetlands, and fourteen (14) ponds were identified in the PSA for this project. All but three (3) of these streams are designated as cold-water streams. The French Broad River in the PSA is a navigable water under Section 10 of the Rivers and Harbors Act of 1899.

There are no designated anadromous fish waters or Primary Nursery Areas present in the PSA. There are no designated High-Quality Waters, Outstanding Resource Waters, or Water Supply Watersheds (WS-I or WS-II) within 1.0 mile downstream of the PSA. The NC Division of Water Resources (NCDWR) 2016 Final 303(d) list of impaired waters (DWR, 2015) includes the French Broad River, Mud Creek, and Devils Fork; however, none of the streams in the project corridor are listed for either turbidity or sedimentation. The French Broad River (Assessment Unit [AU] 6-(54.75)b) from Mud Creek to NC 146 is listed for fecal coliform. Mud Creek (AU 6-55c2) from Clear Creek to Byers Creek is listed for Fish Community - Fair and Benthos - Fair. Devils Fork (AU 6-55-8-2b) from the first unnamed tributary west of Howard Gap Road (SR 1006) to Johnson Drainage Ditch is listed for Benthos - Poor.

The following STIP projects are located in the vicinity of the subject project:

- STIP Project I-2513 (I-26 Connector) would tie into the western terminus of STIP Project I-4700 in Asheville at the I-26/I-40/I-240 interchange. The I-26 Connector is a proposed widening and new location multi-lane interstate highway project to connect I-26 from the I-26/I-40/I-240 interchange to US 19/US 23/US 70 north of Asheville. The 2018 2027 STIP indicates that right of way acquisition will begin in FY 2020 and construction will begin in FY 2020; however, only a portion of the project is funded.
- STIP Project B-5178 was the replacement of Bridge Nos. 235 and 238 on I-26 over Pond Road (SR 3431) and Hominy Creek. This project is located in Buncombe County just south of the I-26 interchange with I-40/I-240 and was completed in 2017.
- STIP Project I-5504 is the proposed modification to the I-26/NC 191 (Brevard Road) interchange in Buncombe County, which includes improvements to the traffic operations and access control along NC 191. NCDOT's 2018 – 2027 STIP indicates that this is a Design-Build project and construction began in 2017. It should be noted that I-5504 overlaps with the northern portion of STIP Project I-4700. The section of I-4700 located in the I-5504 study area (from just south of NC 191 (Brevard Road) to the Pond Road (SR 3431) overpass) will be constructed with STIP Project I-5504. In this area, the median of I-26 will be paved and median barrier installed as part of STIP Project I-5504 so that traffic can be maintained during construction. The limits of median paving extend in both directions on I-26 to where ramp tapers will match existing pavement. The construction of I-5504 is expected to finish just before STIP Project I-4700 is anticipated to begin so the NCDOT requested and received approval from the FHWA to build full-depth pavement in the median and travel lanes on I-26. The benefit will be cost savings from building pavement that does not have to be removed. Another benefit is to reduce the total amount of time of construction on I-26, which will save motorist delays and the associated cost of delay. The additional pavement on I-26 will be "striped out" until the remaining portion of I-4700 is constructed.

- Just outside the eastern study area boundary and parallel to I-26, STIP Project R-5207 is the proposed upgrade to approximately seven miles of Howard Gap Road (SR 1006) in Henderson County from Jackson Road (SR 1539) in Fletcher to US 64 near Hendersonville. The project will widen the existing two lanes to 12-foot lanes, add bike lanes, improve the road geometry (curves and vertical changes), replace four bridges, and add turn lanes at several key intersections. The 2018 2027 STIP indicates that the portion of R-5207 from US 64 to US 25 in Fletcher, NC is currently under construction.
- Located north of the study area boundary, STIP Project A-0010AA proposes improvements to US 19/US 23 (Future I-26) to address traffic congestion, bridge conditions and pavement conditions from just north of I-240 in Asheville to just south of Stockton Road (Exit 13) near Mars Hill in Buncombe County. The project may include adding lanes to portions of US 19/US 23, replacing bridges, and repaving sections of the highway. The 2018-2027 STIP indicates that right of way and construction are scheduled to begin in FY 2020 for the portion of the project nearest to I-240 with some portions currently unfunded.
- Located west of the study area, STIP Project I-4759 proposes to convert the grade separation of Liberty Road (SR 1228) and I-40 to an interchange. The project would also construct a two-lane roadway from US 19/US 23/NC 151 (Pisgah Highway) to Monte Vista Road (SR 1224) partially on new location. The 2018 2027 STIP states that planning/design is in progress and the project is funded; right of way acquisition is scheduled to begin in FY 2019 and construction in FY 2022.
- The <u>DEIS</u> (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx) included STIP Project B-5409, which was the proposed replacement of Bridge No. 58 on Mid Allen Road (SR 1893) over Devils Fork Creek near Hendersonville. This project is located just east of the I-26 corridor along the eastern study area boundary. This project is no longer in the STIP but will be completed with state funding. Construction is scheduled to begin in FY 2021.

Applicant's Stated Needs and Purpose

Applicant's stated needs:

• Improve existing and projected roadway capacity deficiencies.

According to NCDOT, sections of I-26 currently operate at levels of congestion characterized by unstable travel speeds with a high level of discomfort to the driver. As projected traffic volumes increase, more sections of I-26 are projected to operate at similar levels of congestion. I-26 is anticipated to operate over capacity by 2040 (design year), hindering its ability to serve high-speed regional travel.

• Improve insufficient pavement structure and deteriorating existing road surface conditions.

The existing I-26 roadway surface has undergone major rehabilitation twice, most recently in 2011. During past rehabilitation efforts, NCDOT Divisions 13 and 14 also replaced slabs and repaired joints. According to NCDOT, the roadway is again showing signs of deterioration and

additional rehabilitation will not be sufficient to provide a quality roadway because of the lack of depth of remaining concrete. Reconstruction of I-26 in the PSA is needed for high-speed, safe, and efficient travel.

Applicant's stated purpose:

The purpose of the proposed improvements to I-26, from US 25 in Henderson County north to I-40/I-240 in Buncombe County, is to reduce congestion, with a goal of achieving an overall LOS D in the design year (2040), and to improve the pavement structure. LOS D is the standard performance goal target used by NCDOT for environmental studies where congestion is one of the needs being addressed.

Project Description

NCDOT proposes to widen I-26 with the Selected Alternative, the Hybrid 6/8-Lane Widening Alternative. The Hybrid 6/8-Lane Alternative would widen I-26 to three lanes in each direction between US 25 and the US 25 (Asheville Highway) interchange and widen I-26 to four lanes in each direction from the US 25 (Asheville Highway) to the I-40/I-240 interchange. The Preferred Alternative is designed to best fit within the existing right of way limits for I-26. The best fit alignment generally follows the existing alignment, widening to the inside median as much as possible and shifting to the east or west when necessary to avoid impacts to resources where possible.

The majority of the interchanges along the project would not be modified in a notable way for the six-lane section of the Preferred Alternative. Most modifications would be made on the eight-lane section of the Hybrid 6/8-Lane Widening Alternative where the ramp acceleration and deceleration lanes have to be shifted outward to make way for the widened roadway. The reconstruction would be limited only to the areas required to tie back into the existing ramp alignments.

US 64 Interchange

The interchange at US 64 and I-26 operates at LOS B or better on I-26 in 2011 (No Build) and LOS C or worse in 2040 (No Build). Although no traffic analysis was performed on US 64, improving the interchange to allow travel time savings on US 64 is desired by NCDOT and the FBRMPO and is considered a priority project. As part of this project, a Partial Cloverleaf B ("ParClo B") is proposed that would remove two loops and eliminate the back-to-back weave condition on I-26 and US 64, thereby improving the operation of the interchange. In addition, the interchange would introduce enhanced left turns that would move left turning traffic into the center, opposite normal traffic flow. The early decision required to move into the left turn lane removes these vehicles from through travel lanes, improving the flow of traffic on US 64. The ParClo B interchange would also improve conditions for pedestrians and bicyclists on US 64.

US 25 (Asheville Highway) Interchange

As part of this project, the <u>Purpose and Need Traffic Analysis Addendum Technical</u> <u>Memorandum</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/04%20-%20I-4400%20I-

4700%20Purpose%20and%20Need%20Traffic%20Analysis%20Addendum_October%202014 .pdf) (HNTB, 2014) determined that the US 25 (Asheville Highway) interchange would operate poorly in the 2040 design year. Four interchange types, Partial Cloverleaf, Partial Cloverleaf with Design Exception, Diverging Diamond Interchange (DDI), and Displaced Left Turn, were analyzed and included in the FHWA *DEIS* (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx). All the interchange types operated at an acceptable level, with the Partial Cloverleaf operating the best. Based on operation, the Partial Cloverleaf was included for analysis in the FHWA *DEIS* (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx). The Partial Cloverleaf would have the largest impacts of all the interchange types and NCDOT sought to reduce these potential impacts while improving operations with an interchange design that has a smaller footprint.

During its Value Analysis of the project, after the approval of the FHWA *DEIS* (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx), NCDOT designed a fifth interchange type, the Synchronized Interchange (SI). This interchange option requires motorists to turn right at each of the ramp termini from I-26. The motorist must then continue straight or make a U-turn at the signalized intersection if he or she wishes to go in the opposite direction on US 25 (Asheville Highway). If the motorist is on westbound US 25 (Asheville Highway) he/she may turn right to travel north on I-26. A traveler on eastbound US 25 (Asheville Highway) may turn right to travel south on I-26. The westbound and eastbound motorist may turn left to travel southbound and northbound, respectively, on I-26.

Based on internal review and public comment (see <u>Appendix J, FHWA Combined FEIS, Final Section 4(f) Evaluation</u>, and ROD

[https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/16_Appendix% 20J_Agency% 20and% 20Public% 20Involvement_03042019_2.pdf]) following the FHWA <u>DEIS</u> (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx), NCDOT decided to move forward with the analysis of the DDI and SI. Following this analysis, NCDOT chose the DDI as the preferred interchange design due to its lower cost, fewer impacts, and public familiarity.

Rest Areas

The rest areas along I-26, south of Fanning Bridge Road (SR 3539) overpass in Henderson County, would also be reconstructed as part this project. The rest areas are currently undersized based on their current and projected use and the ramps need to be upgraded to current interstate standards. The renovations would include the reconfiguration and expansion of the site, parking areas, and primary building site.

Blue Ridge Parkway Bridge Over I-26

Several options were analyzed in the <u>Blue Ridge Parkway Bridge over Interstate 26 Technical Report</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/14_Appendix%20H_BLRI%20I-26%20Tech%20Report%2007%2030%202018.pdf) (National Park Service-Blue Ridge Parkway [NPS-BLRI] and FHWA-EFL, 2016) for the realignment and replacement or reconstruction of the BRP bridge over I-26 and were presented in the FHWA <u>DEIS</u> (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx). Construction of the new bridge would most likely be from the top down, using segmental construction. The bridge would have two ten-foot travel lanes, three-foot shoulders, and a five-foot sidewalk on the north side to accommodate the Mountains-to-Sea Trail (MST). The report can be found in <u>Appendix H, FHWA Combined FEIS, Final Section 4(f) Evaluation, and ROD</u>

(https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/finaleis/14_Appendix%20H_BLRI%20I-26%20Tech%20Report%2007%2030%202018.pdf).

Following the FHWA <u>DEIS</u> (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx) and comment period, the NPS confirmed Option 4, using a segmental concrete box girder bridge type with Caltrans Type 80 bridge rail as its Preferred Option. A parking pull-off area will also be constructed northeast of the replacement BRP bridge, at Parkway milepost 392.1.

French Broad River Bridge

NCDOT's preferred replacement structure for the bridge over the French Broad River is a three-span bridge. The three spans for this design are anticipated to have lengths of approximately 151 feet, 170 feet, and 143 feet from east to west, and will require two bents in the river. Each bent will require ten drilled shafts. The center span length exceeds the standard concrete girder length typically utilized by NCDOT, so it is likely that final design specifications will call for steel girders. It is expected that this bridge will require approximately three to four years to complete. The proposed design for the bridge over the French Broad River will include shoulders sufficient to convey runoff into adjacent stormwater control devices and eliminate direct discharge into the river.

Section 404/NEPA Merger Process

The project went through the Section 404/National Environmental Policy Act (NEPA) Merger Process. This process engaged federal and state agencies throughout project development.

Concurrence was achieved for each of the following points. The meeting packets, summaries, and signed concurrence forms are located in <u>Appendix J, FHWA Combined FEIS, Final Section 4(f) Evaluation, and ROD (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/finaleis/16_Appendix%20J_Agency%20and%20Public%20Involvement_03042019_2.pdf).</u>

- Concurrence Points 1 and 2: Purpose and Need and Alternatives Considered (signed June 20, 2013)
- Concurrence Point 2A: Bridging Decisions and Alignment Review (signed February 11, 2015)
- Concurrence Point 3: Least Environmentally Damaging Practicable Alternative (signed January 18, 2017)

- Concurrence Point 4A: Avoidance and Minimization (signed October 11, 2017)
- Concurrence Point 4A Revisited: Avoidance and Minimization (signed July 31, 2018) Following the October 11, 2017 concurrence meeting, NCDOT further developed the subject project to include avoidance and minimization measures for the addition of the rest areas along I-26 and the federally endangered gray bat and Appalachian elktoe.
- Concurrence Point 4B for I-4700 (see Construction Phasing): 30 Percent Hydraulic Review, meetings held August 14, 2018 and September 19, 2018
- Concurrence Point 4C for I-4700 (see Construction Phasing): Permit Drawings Review, meeting held November 20, 2018

Construction Phasing

The project is funded in phases in the <u>STIP</u> (https://connect.ncdot.gov/projects/planning/STIPDocuments1/NCDOT%20Current%20STIP.pd f); the first phase is I-4700. Because the funding is divided into phases, the project will be constructed in phases. These phases and the proposed date for construction letting are:

- I-4700 (I-40/I-240 to NC 280 [Airport Road]) Construction (June 2019).
- I-4400C (NC 280 [Airport Road] to US 25 [Asheville Highway]) Construction (June 2019)
- I-4400BB (US 25 [Asheville Highway] to US 64 [Four Seasons Boulevard/Chimney Rock Highway]) Construction (June 2019)
- I-4400BA (US 64 US 64 [Four Seasons Boulevard/Chimney Rock Highway] Interchange) Construction (FY 2023)
- I-4400A (US 64 [Four Seasons Boulevard/Chimney Rock Highway] to US 25) Currently unfunded

Any authorization (permit) that the Corps may issue for this project would be modified to allow construction of subsequent phases that correspond with the construction schedule. Because I-4700 would be constructed first, final design has been completed for this phase. Based on the final design for I-4700, 2,956 linear feet of stream and 1.56 acres of wetland would be permanently impacted for this Phase (Phase 1). Note that 282 linear feet of the stream impact total for Phase 1 would be for bank stabilization.

Because the other phases of the project would be constructed later, preliminary designs have been completed for them with impacts estimated based on design slope stake limits plus a 25-foot buffer. Construction on these phases would not be authorized until final designs are complete, compensatory mitigation has been approved, and all permits modified to reflect any additional avoidance and minimization efforts. These phases and their estimated impacts are shown in the table below.

Estimated Impacts of I-4400 Phases C, BB, BA, and A					
Phase	Stream Impacts (linear feet)	Wetland Impacts (acres)	Open Waters (acres)		
I-4400C	4,268	0.77	0		
I-4400BB	2,354	0.04	0		
I-4400BA	185	0.00	0		
I-4400A	5,068	0.54	0		

French Broad River

As previously stated, the existing pair of two-lane bridges that carry I-26 over the French Broad River would be replaced with one new structure that would provide a total of eight travel lanes. In coordination with the Corps, U.S. Fish and Wildlife Service (USFWS), FHWA, NCDWR and North Carolina Wildlife Resources Commission (NCWRC), NCDOT evaluated various constraints associated with the bridges' replacement. This analysis and coordination is documented in the *I-26 Bridge Over the French Broad River Construction and Demolition* (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35-1_I-26%20Bridge%20Over%20FBR%20Construction%20and%20Demolition_11062018.pdf) (HNTB, 2018), which is part of the *Biological Assessment* (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35_I-4400%20I-4700_FINAL%20I-26%20Widening%20BA%2020180816_w%20Appendices.pdf) (BA) (NCDOT, 2018), and can be found in Appendix A of the FHWA *Combined FEIS, Final Section 4(f) Evaluation, and ROD*.

To build the bridge, access roads and causeways would be used. Access roads are required to transport materials and construction equipment to the worksite. The access roads would be built parallel to I-26, one in each quadrant of I-26 and the river. Due to insufficient area between the toe of slope and the top of bank to allow construction vehicle passage under the bridge and the location of the interior bents within the river, a causeway would be required to provide construction access. Between 51 and 67 percent of the river would remain free-flowing depending upon the causeway stage. The bridge is anticipated to be built in four stages. Avoidance and minimization measures associated with the access roads and causeways are discussed in the Avoidance and Minimization section.

The French Broad River was modeled using the USACE Hydrologic Engineering Center's River Analysis System (HEC-RAS). The modeling was conducted for two scenarios, the first with the causeway that is anticipated to be in place for the entire construction time, shown as Stage 1A, 2A, 3A in the *I-26 Bridge Over the French Broad River Construction and Demolition* (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35-1_I-26%20Bridge%20Over%20FBR%20Construction%20and%20Demolition_11062018.pdf). The second scenario used the 'L' causeway extension that would be in place for approximately four weeks at the end of construction. The modeling shows a rise in the water surface elevation (WSE) during a mean rain event and during a 100-year storm event for both scenarios. The rise in WSE under the mean event for the Stage 1A, 2A, 3A causeway is approximately 8.5 inches at approximately 0.02 mile (116 feet) upstream of the causeway, and returns to 0 inches, or no

difference, 0.6 mile upstream. During a 100-year storm event a WSE rise of approximately 1.5 feet to 2.5 inches may occur between the causeway and approximately 2.1 miles upstream of the bridge before returning to a normal WSE for a 100-year flood event. Similar results were found for the Stage 4, 'L' causeway.

Using the Flood Risk Information System (FRIS) database, nine residential structures are located within the 100-year floodplain from the I-26 bridge over the French Broad River to the Long Shoals Road bridge over the FBR, approximately 3.2 miles upstream. Aerial photography suggests an additional eight structures may also be located in the 100-year floodplain. During a 100-year flood event all of the structures would be flooded under existing conditions (see Structures in Floodplain, Appendix A of the <u>I-26 Bridge Over the French Broad River Construction and Demolition</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/finaleis/35-1_I-

26% 20Bridge% 20Over% 20FBR% 20Construction% 20and% 20Demolition_11062018.pdf). Due to the temporary causeway (Stage 1A, 2A, 3A) an additional increase of 10 inches in flood water would occur to the structure located approximately 0.6 mile upstream. The temporary 'L' causeway (Stage 4) would increase the 100-year flood water elevation by an additional 3 inches for the structure located approximately 0.6 mile upstream. No additional structures are anticipated to be affected by a 100-year storm event while the causeways are in place.

A <u>River Safety Plan for the Construction of the I-26 Bridge over the French Broad River</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35-2_I-4400%20I-4700_River%20Safety%20Plan%20for%20the%20Construction%20of%20the%20I-26%20Bridge%20over%20FBR_Final_11192018.pdf) (RSP) has been developed for the project. To ensure the safe passage of river users during the construction and demolition of the I-26 bridge over the French Broad River, NCDOT has developed this RSP to be used in conjunction with the Strategic Communications Plan (SCP) for the Construction of the I-26 Bridge over the French Broad River.

A <u>Strategic Communications Plan for the Construction of the I-26 Bridge over the French Broad River</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35-3_I-4400% 20I-4700% 20Communication% 20Plan% 20for% 20the% 20Construction% 20of% 20the% 20I26% 20Bridge% 20over% 20FBR_Final_11042018.pdf) has been developed. Outlined are: the Goals of the Strategic Communications Plan, lists of the Targeted Audiences, lists of the Implementation Strategies and Tactics (and includes the link to the comprehensive project website), a discussion of the Communication Channels (informing the Public Relations Office of updates to river conditions, and a post of communications to local recipients or posts to social media, or the sending of a news release if major conditions justify such release), lists of the Required Resources, and a Timeline for Plan Implementation.

NC Emergency Management

NCDOT is partnering with NC Emergency Management to provide enhanced flood inundation mapping on the French Broad River upstream of I-26 crossing during the construction of I-4700. The information is being added to Emergency Management's Flood Inundation Mapping and Alert Network (FIMAN) and will be maintained following the completion of the project. The

inundation mapping will extend up to Long Shoals Road. An additional stream gauge is being placed at Long Shoals Road to provide better data resolution. In addition, causeway effects will be included in the inundation mapping. More information about FIMAN is located at the link on the previous page of this application. The FIMAN site for the I-4700 construction is planned to be operational by early spring 2019.

United States Geological Survey

NCDOT is partnering with United States Geological Survey to monitor and study the French Broad River during construction of I-4700 and I-4400. The focus of the study will be to evaluate and monitor the geomorphological conditions and water quality of the French Broad River and better determine the discharges from urban streams draining to the French Broad in the project area. The plan is for the study to begin in March of 2019, prior to the Project Let and continue through completion.

Construction of the proposed project would require the following impacts to waters of the US:

Segment	Design	Stream Imp	,	Wetland Impacts	Open Waters
Segment	Stage	Permanent	Temporary	(acres)	(acres)
I-4400C	Preliminary ¹	4,268	X	0.77	0
I-4400BB	Preliminary ¹	2,354	X	0.04	0
I-4400BA	Preliminary ¹	185	X	0.00	0
I-4400A	Preliminary ¹	5,068	X	0.054	0
Preliminary 1	11,875	X	1.35	0	
I-4700 A	Final	1,404	121	0.74	0
I-4700 B	Final	1,552	1,480	0.85	0
Final Design Total:		2,956	1,601	1.56	0
	14,831	1,601	2.91	0	

¹Preliminary impacts were determined by measuring 25' outside of preliminary slope stake limits and are presented as permanent impacts requiring mitigation.

Permanent impacts would result from the replacement or extension of culverts; extension of pipes; bank stabilization; other placement of rip rap; embankment/road fill; stream realignment/relocations.

Avoidance and Minimization

According to the Applicant, avoidance and minimization measures have been employed in the project area to the maximum extent practicable. Listed below are the measures that would be implemented as presented and concurred with at Merger Concurrence Point 4A: Avoidance and Minimization (<u>Appendix J, FHWA Combined FEIS, Final Section 4(f) Evaluation, and ROD</u>)

(https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/16_Appendix%20J_Agency%20and%20Public%20Involvement_03042019_2.pdf):

Section 404 Avoidance and Minimization Measures

- NCDOT chose a best-fit design that widens I-26 into the median wherever possible and widens to the outside where there are the least amount of impacts.
- NCDOT reduced the slopes from 4:1 to 2:1. In so doing, NCDOT:
 - o Minimized impacts to streams by approximately 10,000 feet,
 - o Avoided impacts to 19 wetlands (approximately 1.2 acres),
 - o Minimized impacts to wetlands by approximately 9.6 acres including approximately 2.6 acres to wetland WCH (Biltmore Bog), and
 - Avoided impacts to two ponds (>0.1 acre).
- NCDOT selected the DDI design at US 25 (Asheville Highway) instead of the ParClo B design. In doing so, NCDOT:
 - o Minimized approximately 890 feet of stream impacts, and
 - o Minimized approximately 0.2 acre of wetland impacts.

(Note: Reductions to impacts are the difference between current design with 4:1 slope stake limits plus 40 feet and current design with 2:1 slope stake limits plus 25 feet. Slope stake limits plus 25 feet are used at CP4A.)

Rest Areas

Replacement of rest areas along I-26 will impact approximately 114 ft of stream S1.

Replacement of the I-26 bridge over the French Broad River

- Three-span bridge design:
 - o Reduces number of bents in the water.
 - o Does not require a center bent.
 - o Requires a smaller causeway to build.
 - o Reduced time to construct.
- Four-quadrant access road
 - o Safer for both construction workers and the traveling public.
 - Use of temporary retaining walls to limit impacts to natural resources and Biltmore Estate.
 - o Footprint of the access roads will not extend beyond the project footprint.
 - To reduce potential sediment and erosion caused by southeast and northeast access roads NCDOT shall temporarily pipe streams SEE and SFG, respectively, during bridge construction and demolition. USFWS and USACE will have the opportunity to review the design of the Sediment and Erosion Control (SEC) measures for Streams SEE and SFG. A revegetation and stream monitoring plan shall be developed for Streams SEE and SFG. The revegetation and stream monitoring plan shall be approved by the USACE and will commence once the bridge construction and demolition are complete and the pipe is removed. Monitoring to observe vegetation success and stream stability will take place for a minimum of three years after construction.
- Causeways will be used for construction and demolition.
 - o Do not require drilled piles.
 - o Reduces time to build the I-26 bridge to 3 to 4 years.
 - o Removes an obstacle in the air (eliminating impediment to gray bat flight).

- Causeway design and use.
 - o Increased amount of river free flow area at maximum causeway construction from an initial 28 percent to 51 percent in the current design.
 - o Minimization of causeway during each stage by adding/removing material.
 - o Causeway extension (Stage 4) will be sloped to allow water to flow over top; reducing overall impact to channel flow.
 - o For bank stability and to prevent scour, one layer of rock will be left behind until the end of construction/demolition.
 - O To minimize disturbance to the riverbed, all readily detectable causeway material will be removed to the extent practicable, while removing as little of the original riverbed as possible.
 - o NCDOT shall require the contractor to use clean stone for the construction of the causeways. This will minimize unnecessary sediment input into the river.
 - O All stone will be removed and disposed of off-site, or the stone can be used in areas that require permanent stone protection after project completion. NCDOT shall also require that concrete barriers (barrier rail) be placed along the downstream edge of each causeway to limit the downstream movement of causeway material during high flow events.
 - O Construction fabric will not be used under the causeway material, because it tends to tear into pieces and float downstream during removal.
 - With the exceptions noted for the drill rig and crane, all construction equipment will be refueled outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater) and be protected with secondary containment. During crucial periods of construction and demolition, when the drill rig and crane cannot be moved, the drill rig and crane can be refueled while inside the 100-year floodplain provided that spill response materials (such as spill blankets and fueling diapers) are used during the refueling. Hazardous materials, fuel, lubricating oils, or other chemicals will be stored outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater) and not in a Water of the U.S. Areas used for borrow or construction by-products will not be located in wetlands or in the 100-year floodplain.
 - Equipment that is placed on the causeways will be removed any time throughout a work day when the water level rises, or is expected to rise overnight, to a point where the equipment could be flooded, or during periods of inactivity (two or more consecutive days). The only exception to this measure is that the drill rig and crane may be left in place for periods of inactivity; however, it must also be removed if the water rises, or is expected to rise, to a point where the drill rig and crane could be flooded.
 - NCDOT shall require the contractor to use brand new or steam cleaned equipment to access causeways that are underwater if these causeways are utilized for removal of existing bents in underwater conditions.
- Construction minimization measures include:
 - o NCDOT shall include language outlining the staged construction/demolition in the construction contract.
 - o NCDOT shall provide USFWS with the Sediment and Erosion Control plan and allow 15 days for review.

- o The SEC plan shall be in place prior to any ground disturbance. When needed, combinations of erosion control measures (such as silt bags in conjunction with a stilling basin) will be used to ensure that the most protective measures are being implemented.
- NCDOT shall commit to retain one dedicated inspector for each project section (I-4400, I-4700) to perform SEC inspections. Inspections of erosion control devices adjacent to the bridge will be completed daily by the Construction Project Inspector.
- O When constructing drilled bents, a containment system will be developed so that substrate material does not enter the river. Any material by-product will be pumped out of the shaft to an upland disposal area and treated through a proper stilling basin or silt bag.
- o Construction of new bridges will be accomplished in a manner that prevents uncured concrete from coming into contact with water entering or flowing in the river
- NCDOT shall commit to requiring its contractor to have clean, non-leaking equipment; diapers on-site for each causeway; and spill kits located at each causeway.
- o Activities in the floodplain shall be limited to those needed to construct the proposed bridge and remove the existing bridges.
- O All construction equipment will be refueled outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater) and be protected with secondary containment. During crucial periods of construction and demolition, when the drill rig and crane cannot be moved, the drill rig and crane can be refueled while inside the 100-year floodplain provided that spill response materials (such as spill blankets and fueling diapers) are used during the refueling. Hazardous materials, fuel, lubricating oils, or other chemicals will be stored outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater), not in a Water of the US, and preferably at an upland site. Areas used for borrow or construction by-products will not be located in wetlands or in the 100-year floodplain.
- The Contractor shall be required to prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion of each phase of structure construction, demolition and completion. The Contractor will not be permitted to suspend his operations except for reasons beyond his control or except where the Engineer has authorized a suspension of the Contractor's operations in writing.
- o In the event that the Contractor's operations are suspended in violation of the above provisions or it is determined the Contractor is not deemed to be pursuing the work in a continuous manner in accordance with his submitted and approved schedule, the sum of \$1,000 per day will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damaged due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work.

Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

- Construction activity at night.
 - The amount and type of lighting used for all construction activities will be minimized to the extent practicable.
 - o To minimize potential impacts to lactating females and their pups, between June 1 and August 1, NCDOT will commit to restrict the construction contractor to no more than 28 total nights of work, and no more than four consecutive nights within a two-week period.
 - o Lighting used for construction will be limited to whatever is necessary to maintain safety standards and will only be directed toward active work areas.
 - o NCDOT will place solar-powered, steady-state red lights on the causeways to alert river users to their locations. Generators will not be used to provide power.
- Demolition of the existing bridge:
 - o After removal of existing bents, natural substrate will not be used as backfill.
 - o Removal of the existing bridge shall be performed so as not to allow debris to fall into the water. If debris is dropped in river, it will be immediately removed.
 - o All resource agencies will be invited to review the demolition plan and will be notified prior to start of demolition so they may have a representative on site.
 - NCDOT shall provide USFWS with the French Broad River bridge demolition plan and allow 15 days for review.
- Sedimentation and Erosion Control
 - o Implementation of NCDOT's Best Management Practices for the Protection of Surface Waters (BMPs) will minimize impacts to water resources during the pre-construction, construction, maintenance, and repair situations.
 - Use of Design Standards in Sensitive Watersheds [15A NCAC 04B .0124 (a) (e)]
 - From the Blue Ridge Parkway bridge to the northern terminus of the project.
 - For portions of the project within 1 mile and draining directly to streams that are identified as NCDEQ and/or NCWRC designated trout streams.
 - For portions of the project within 1 mile and draining directly to streams where aquatic threatened or endangered species are present.
 - Environmentally Sensitive Areas will be defined by a 50-foot buffer zone on both sides of jurisdictional streams measured from top of streambank, in which the following shall apply:
 - The Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations.
 - Once grading operations begin, work shall progress in a continuous manner until complete.
 - Erosion control devices shall be installed immediately following the clearing operation.
 - Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment.

- Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area, whichever is less.
- All sedimentation and erosion control measures, throughout the project limits, must be cleaned out when half full of sediment, to ensure proper function of the measures.
- o NCDOT shall install a rainfall data logger at the French Broad River and other sensitive locations to continuously monitor and record rainfall events.
- o NCDOT shall commit to self-reporting SEC device failures to USFWS that result from excessive rainfall events (intensity that exceeds 25-year storm event).
- o NCDOT shall commit to channel morphology monitoring.
- If monitoring at the French Broad River reveals excessive bank erosion, bank instability, and sedimentation associated with the bridge replacement, NCDOT will work to identify the cause and will make improvements to address the problems in a timely manner.

- Stormwater Control

- NCDOT will prepare a stormwater management plan (SMP) that implements structural and non-structural post-construction stormwater BMPs to the maximum extent practical (MEP), which is consistent with the Department's National Pollutant Discharge Elimination System (NPDES) Post-Construction Stormwater Program.
- NCDOT recognizes that suitable Stormwater Control measures for one species may be detrimental to another and therefore resolves to coordinate BMPs with the State Hydraulics Engineer and USFWS.
- Minimization of impacts to French Broad River users:
 - o NCDOT shall develop a Communication Plan, specific to the construction and demolition of the French Broad River bridge, to inform stakeholders.
 - NCDOT shall require the contractor to use a catchment system to avoid having construction/demolition debris fall on river users, equestrian and bicyclists using Old River Road, or in the water.
 - o NCDOT shall use a floating navigational aid to direct river users to the "safe zone" of the river, away from construction.
 - o NCDOT shall place steady-state, solar-powered red lights on the causeway to alert river users to its location. Generators will not be used to provide power.
 - o NCDOT shall place signs at river inputs upstream and downstream of the construction zone to alert river users to the I-26 bridge construction.

Section 7 of the Endangered Species Act Avoidance and Minimization

Commitments listed under Section 404 of the Clean Water Act are also commitments in the <u>BA</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35_I-4400%20I-4700_FINAL%20I-26%20Widening%20BA%2020180816_w%20Appendices.pdf). Additional commitments in the *BA* include:

- Minimization of light from vehicles by using 42-inch solid, concrete, "Jersey barrier style" guardrail.
- Minimization of tree clearing by using a "best fit" design that includes widening in the median to the extent practicable.

- Tree clearing between the Blue Ridge Parkway bridge over I-26 and NC 191 (Brevard Road) will be minimized to the extent practicable.
- No trees will be cleared beyond what will be necessary to establish the permanent project footprint.
- Because the project includes construction on NPS land that might be within habitat that is suitable for Indiana bat, emergence and/or acoustic surveys shall be conducted prior to removal of trees if the work would be conducted between April 15 and August 15. No significant tree removal within 5 miles of known hibernacula can occur between April 1 and November 15.
- Between April 15 and August 15, all construction-related lighting used for construction will be limited to whatever is necessary to maintain safety in active work areas between the Blue Ridge Parkway and Glenn Bridge Road, excepting the existing brightly lit area associated with the NC 191 (Brevard Road) interchange. Any lighting on the river or adjacent wooded area will be indirect.
- Coordination between the NCDOT, NPS, and FHWA will continue during the design and construction of the project to minimize impacts to Blue Ridge Parkway operations and visitor experience as well as the Mountains-to-Sea Trail. (Section 106 MOA, signed May 30, 2018). This MOA can be found in Appendix L of the Combined FEIS, Final Section 4(f) Evaluation, and ROD (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/finaleis/18_Appendix%20L_Section%20106%20MOA.pdf).
- Eastern Federal Lands Highway Division (EFLHD) of FHWA will develop a re-vegetation/landscaping plan to re-establish native vegetation and provide for a continuous visual experience for the trail and Blue Ridge Parkway user. (Section 106 Memorandum of Agreement [MOA], signed May 30, 2018). This MOA can be found in Appendix L of the Combined FEIS, Final Section 4(f) Evaluation, and ROD (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/18_Appendix%20L_Section%20106%20MOA.pdf).
- From the Blue Ridge Parkway bridge to the northern terminus of the project, NCDOT will develop a revegetation plan that incorporates native woody and/or shrubby vegetation, as appropriate, for areas outside of the final slope stake limits disturbed during construction.
- Revegetation areas will be visually monitored following planting by NCDOT. The monitoring shall be conducted annually for a minimum of 3 years after final planting. Photo documentation shall be utilized to document the success of the vegetation and a report shall be submitted to the USFWS within sixty days post-monitoring.
- NCDOT will contact USFWS if new information about the gray bat is discovered, as it relates to the project.
- NCDOT will report any dead bats found on the construction sites.

Human Environment Avoidance and Minimization Measures

- NCDOT minimized the number of Residential Relocations from 18 (ParClo B) to 8 (DDI) and Business Relocations from 1 (ParClo B) to 0 (DDI).

- NCDOT minimized the design footprint at the US 25 (Asheville Highway) interchange was determined to have "no effect" to the Cureton House property under Section 106 of the National Historic Preservation Act.

Compensatory Mitigation

The purpose of compensatory mitigation is to offset unavoidable functional losses to the aquatic environment resulting from project impacts to waters of the U.S. For Sections I-4700A & B, the Applicant has proposed to permanently impact 2,956 linear feet of stream; of this total, 282 linear feet of stream would be impacted for bank stabilization and would not require mitigation. The Applicant proposes to purchase credits from the NC Division of Mitigation Services (NCDMS) as compensatory mitigation to offset unavoidable functional losses to the aquatic environment that would result from 2,674 linear feet of permanent impacts to streams and 1.56 acres of permanent impacts to riparian wetlands. NCDOT proposes to mitigate for the permanent impacts as follows: 1,138 linear feet of good quality streams at a 2:1 ratio, 1,536 linear feet of fair quality streams at a 1:1 ratio, and a 2: 1 ratio for wetland impacts.

For sections still in preliminary design phase that are due to Let within five years (I-4400BA, I-4400BB, and I-4400C), the Applicant proposes to purchase credits from the NCDMS as compensatory mitigation to offset unavoidable functional losses to the aquatic environment resulting from impacts to streams and wetlands as follows: Section I-4400BA (185 linear feet of permanent impacts to streams and no permanent impacts to wetlands); Section I-4400BB (2,354 linear feet of impacts to streams and 0.04 acre of permanent impacts to wetlands); and Section I-4400C (4,268 linear feet of permanent impacts to streams and 0.77 acre of permanent impacts to wetlands). As each section goes through final design for permitting, mitigation for the impacts to streams and wetlands will be revised accordingly.

For Section I-4400A, which is currently un-funded, the Applicant proposes to obtain mitigation from NCDMS when this section goes through final design. Currently, the preliminary impacts for I-4400A are 5,068 linear feet of streams and 0.54 acre of permanent impacts to wetlands. When Section I-4400A goes through final design for permitting, the impacts to streams and wetlands will be revised, and the mitigation request will be revised accordingly.

Essential Fish Habitat

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, this Public Notice initiates the Essential Fish Habitat (EFH) consultation requirements. The Corps' initial determination is that the proposed project would not affect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

The FHWA is the lead federal agency for this project; as such, the FHWA is the agency responsible for project-related, required consultation(s) in accordance with Section 106 of the National Historic Preservation Act (NHPA). In accordance with Section 106 of the NHPA, the

FHWA has made determinations of effect to historic properties and received concurrence with these determinations from the NC HPO.

According to the FHWA and NCDOT nine resources within the PSA were found to be either listed on the National Register of Historic Places (NRHP) or were considered eligible for listing. At meetings on May 19, 2015, April 26, 2016, July 25, 2017, and December 11, 2018 representatives of the NCDOT, FHWA, and NCHPO reached concurrence on the effects of the proposed alternatives on these resources.

Property and Status	Effect Finding	Reasons			
McMurray House (Windy Hill) (HN1904) DE-Criterion C	No Adverse Effect	Access road along west side of property will be temporarily closed during construction but does not impact access to the house.			
Camp Orr (Camp Pinewood) (HN1905) DE-Criteria A & C	No Adverse Effect **4(f) de minimis	Some small sections of new right of way required on east side of interstate to accommodate cut and fill slopes and the control of access fencing will be relocated as needed in these areas. Require some tree removal along length of property that borders interstate. Some fill impacts to wetlands adjacent to historic property, but within NCDOT existing ROW. Does not impact contributing resource.			
Sholtz-Cantrell Estate (HN0059) DE-Criterion A	No Adverse Effect **4(f) de minimis	Some small sections of permanent drainage easement and temporary construction easement on the historic property will be required to upgrade the drainage system along Clear Creek Road. Viewshed from house will not be impacted.			
Hyder Dairy Farm (HN1906) DE-Criteria A & C	No Adverse Effect **4(f) de minimis	6			
Mountain Sanitarium (HN1907) DE-Criteria A & C	No Effect	No construction work within property boundary.			
Rugby Grange (HN0042) NR-Criteria A & C	No Effect	No construction work within property boundary. Some fill impacts to wetlands adjacent to historic property, but within NCDOT existing ROW. Viewshed from house will not be impacted.			
Cureton House (HN1912) DE-Criterion C	No Effect	No construction work within property boundary. Viewshed from house will not be impacted. An expected 2 decibel noise increase over existing levels, resulting in a 67 dBA noise level in all build alternatives, will not be noticeable to the average human ear, and is not considered an effect.			
Blue Ridge Parkway (NC0001) DE-Criteria A & C	Adverse Effect 4(f)	Bridge carrying BRP over I-26 will be demolished and replaced with a new structure developed in collaboration with Eastern Federal Lands, BRP, NCDOT, NC-HPO, and FHWA.			

Property and Status	Effect Finding	Reasons
Biltmore Estate (BN0004) NR-Criteria A, B, C, & D National Historic Landmark	No Adverse Effect **4(f) de minimis	Some small sections of new ROW required to accommodate cut and fill slopes and the Control of Access fencing will be relocated as needed in these areas. Requires minimal tree removal along length of property that borders interstate. Some fill impacts to wetlands adjacent to historic property, but within NCDOT existing ROW. Does not impact contributing resources.

^{**}FHWA is using the HPO's and the NPS's concurrence, as applicable, as the basis for a *de minimis* finding for the following properties, pursuant to Section 4(f):

- 1. Camp Orr (Camp Pinewood) (HN1905)
- 2. Hyder Dairy Farm (HN1906)
- 3. Biltmore Estate (BN0004)

Section 106 of the National Historic Preservation Act

The project will have an adverse effect on the Blue Ridge Parkway bridge over I-26. Through coordination with the NPS, NC HPO, FHWA-Eastern Federal Lands, FHWA-NC, and NCDOT a Section 106 MOA was executed on May 30, 2018. This MOA can be found in <u>Appendix L of the Combined FEIS, Final Section 4(f) Evaluation, and ROD</u>

(https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/finaleis/18_Appendix%20L_Section%20106%20MOA.pdf).

In addition, the NPS will adopt the FHWA <u>Combined FEIS</u>, <u>Final Section 4(f) Evaluation</u>, <u>and ROD</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/01_I4400-I4700_Final% 20EIS% 20Final% 20Section% 204(f)% 20ROD_FINAL_03052019.pdf) and amend it to include its Non-Impairment Determination. The USACE will not issue its permit until the NPS ROD is complete.

Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) provides protection to historic properties, public parks, and recreation areas. The Preferred Alternative would result in the Section 4(f) use of Camp Orr, Sholtz-Cantrell Estate, Hyder Dairy Farm, French Broad River Paddle Trail, BRP, MST, and Biltmore Estate. Through consultation with the officials with jurisdiction it was determined that the minor use of Camp Orr, Sholtz-Cantrell Estate, Hyder Dairy Farm, French Broad River Paddle Trail, MST, and Biltmore Estate would result in a *de minimis* impact.

The Final Section 4(f) Evaluation of the *Combined FEIS, Final Section 4(f) Evaluation, and ROD* (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/01_I4400-I4700_Final% 20EIS% 20Final% 20Section% 204(f)% 20ROD_FINAL_03052019.pdf), determined that there is no feasible and prudent build alternative that would fully avoid Section 4(f) properties, a least harm analysis was conducted for the BRP bridge replacement.

Pursuant to 23 CFR 774.3(c), if the avoidance analysis determines that there is no feasible and prudent avoidance alternative, then only the alternative that causes the least overall harm to the Section 4(f) property may be approved. All of the action alternatives considered were evaluated to determine which alternatives would cause the least overall harm to the Section 4(f) property.

Based on comparative evaluation of each Option's impacts, costs and benefits, the preferred BRP Option 4 would improve the conditions of the BRP (and the MST) from an operational perspective resulting in the least overall harm to the Section 4(f) property.

Archaeological Resources

By letters dated September 17, 2014, and October 22, 2014, the NCDOT coordinated with the NC HPO on an archaeological reconnaissance within the Area of Potential Effect (APE). Two sites, 31BN122 and 31HN198, were singled out for further archaeological reconnaissance. The NC SHPO concurred by letter of November 18, 2014, that no further work is needed for these sites. Neither of these two sites would be impacted by the project.

In addition, a pedestrian survey of the Blue Ridge Parkway APE was completed by the NPS on July 21, 2015 resulting in the conclusion that no known archeological sites would be impacted.

In a letter dated November 18, 2014 (Appendix L, Combined FEIS, Final Section 4(f) Evaluation, and ROD [https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/18_Appendix%20L_Section%20106%20MOA.pdf]), the HPO provided concurrence that no additional archaeological survey work is required for the subject project. In a memorandum from the NPS's Blue Ridge Parkway archaeologist, dated July 22, 2015, it is noted that a pedestrian survey of the Blue Ridge Parkway Bridge replacement APE was completed by the NPS. Review of known archaeological sites from the North Carolina Office of State Archaeology (OSA) and the NPS Archaeological Site Management Information System (ASMIS) resulted in the determination that no known sites would be impacted by the proposed bridge replacement and realignment of the parkway.

In a letter dated February 8, 2017 (<u>Appendix M, Combined FEIS, Final Section 4(f), and ROD</u> [https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/19_Appendix%20M_FINAL_BO_I-4400_I-4700%20w_%20CL.pdf]), the Tribal Historic Preservation Office (THPO) of the Eastern Band of Cherokee Indians (EBCI) noted that an archaeological survey of the project study area had been conducted. No archaeological sites are considered eligible for the NRHP and the EBCI THPO concluded that the project may proceed.

By email dated November 3, 2016, the United Keetoowah Band (UKB) of Cherokee Indians recommended that a cultural resources inventory be completed prior to project implementation. According to the Applicant, the FHWA and NCDOT responded to this request noting the archaeological studies and their conclusions as stated above.

Endangered Species

The FHWA is the lead federal agency for this project. In accordance with Section 7(a)(2) of the Endangered Species Act (ESA), the FHWA has made determinations of effect to federally listed species and received concurrence with these determinations from the USFWS. The following table contains the federally listed threatened and endangered species for Buncombe and Henderson Counties.

Scientific Name	Common Name	Federal Status	Habitat Present	County	Biological Conclusion
Alasmidonta raveneliana	Appalachian elktoe	E	Yes	Buncombe and Henderson	May Affect Likely to Adversely Affect
Bombus affinis	Rusty-patched bumble bee ^{1, 2}	E	No	Buncombe ^{1,2} and Henderson ^{1,2}	Not Required ^{1, 2}
Epioblasma florentina walkeri (= E. walker)	Tan riffleshell	E	Yes	Buncombe ^{1,2}	Not Required ^{1, 2}
Erimonax monachus	Spotfin chub (=turquoise shiner)	Т	No	Buncombe ^{1,2}	Not Required ^{1, 2}
Geum radiatum	Spreading avens	Е	No	Buncombe	No Effect
Glaucomys sabrinus coloratus	Carolina northern flying squirrel	Е	No	Buncombe and Henderson	No Effect
Glyptemys muhlenbergii	Bog Turtle	T(S/A)	Yes	Buncombe and Henderson	Not Required ³
Gymnoderma lineare	Rock gnome lichen	Е	No	Buncombe	No Effect
Helonias bullata	Swamp pink	T	Yes	Henderson	No Effect
Isotria medeoloides	Small whorled pogonia	Т	Yes	Henderson	No Effect
Microhexura montivaga	Spruce fir moss spider	Е	No	Buncombe	No Effect
Myotis grisescens	Gray bat	E	Yes	Buncombe and Henderson ⁴	May Affect Likely to Adversely Affect
Myotis septentrionalis	Northern long-eared bat	Т	Yes	Buncombe and Henderson	May Affect Not Likely to Adversely Affect ⁵
Myotis sodalis	Indiana bat	E	Yes ⁶	Blue Ridge Parkway ⁶	May Affect Not Likely to Adversely Affect
Platanthera integrilabia	White fringeless orchid	T	No	Henderson ¹	Not Required ^{1,2}
Sagittaria fasciculata	Bunched arrowhead	E	Yes	Henderson ^{1,2} and Buncombe	No Effect
Sarracenia rubra ssp. jonesii	Mountain sweet pitcher plant	E	Yes	Henderson and Buncombe	No Effect
Sisyrinchium dichotomum	White irisette	Е	Yes	Henderson	No Effect
Solidago spithamaea	Blue Ridge goldenrod	Т	No	Buncombe	No Effect
Spirea virginiana	Virginia spiraea	Т	Yes	Buncombe ^{1,2}	Not Required ^{1,2}

Scientific Name Common Name	Federal Status	Habitat Present	County	Biological Conclusion
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E - Endangered

The presence of the gray bat and Appalachian elktoe were recorded in the PSA following FHWA's <u>DEIS</u> (https://www.ncdot.gov/projects/i-26-widening/Pages/draft-environmental-impact-statement.aspx). FHWA and NCDOT subsequently entered into consultation with USFWS under Section 7 of the Endangered Species Act and began additional surveys for the gray bat. FHWA and NCDOT completed a <u>BA</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/finaleis/35_I-4400% 20I-4700_FINAL% 20I-

26%20Widening%20BA%2020180816_w%20Appendices.pdf) for the gray bat and Appalachian elktoe in August 2018. The Service issued its *Biological Opinion (BO)* in February 2019 (Appendix M, Combined *FEIS*, *Final Section 4(f) Evaluation*, and *ROD*

[https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-

eis/19_Appendix%20M_FINAL_BO_I-4400_I-4700%20w_%20CL.pdf]). The following is a summary of the biological conclusion and the Service's Opinion for each species.

Gray bat

Based on acoustic survey data collected by NCDOT and NCWRC, gray bats are known to be present in the vicinity of the proposed project between spring and fall. Maternity, bachelor, and transient roosts have been identified within and/or adjacent to the project study area. However, no hibernacula are known from North Carolina. Details of the acoustic and structure surveys, as well as a discussion of the potential effects of the proposed project on the gray bat are found in the <u>BA</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35_I-4400%20I-4700_FINAL%20I-26%20Widening%20BA%2020180816_w%20Appendices.pdf) prepared for this project.

The following biological conclusion for the gray bat is provided in the BA:

No bats or evidence of bats were observed on any bridges or in any culverts that will be included in project construction activities. Direct impacts to gray bat due to modification or elimination of their summer roosts are not expected.

There are not any known gray bat hibernacula in Buncombe or Henderson Counties, and there are not underground mines located within the Action Area or within 3 miles of the Action Area. Therefore, no impacts to gray bat winter roosting habitat are anticipated.

T - Threatened

T(S/A) – Threatened due to similarity of appearance

¹Historic record (the species was last observed in the county more than 50 years ago)

²No Section 7 survey, conclusion, or consultation is required at this time.

³Species listed as T(S/A) are not biologically endangered or threatened and are not subject to Section 7 consultation and therefore no Biological Conclusion is required.

⁴Probably/Potential (the species is considered likely to occur in this county based on the proximity of known records (in adjacent counties), the presence of potentially suitable habitat, or both.

⁵Although there is no known presence of Northern long-eared bat within the study area, because some tree clearing will be necessary on Parkway property, NPS prefers to exercise caution and assume presence. Therefore, under Section 7 consultation the May Affect Not Likely to Adversely Affect conclusion was given.

⁶Indiana bat is not listed in either Henderson or Buncombe County. Due to the fact that some tree clearing will be necessary on Parkway property, and NPS believes Indiana bat to be present on Parkway property based on their acoustic surveys, the NPS prefers to exercise caution and assume presence of Indiana bat on Parkway property. Therefore, under Section 7 consultation the May Affect Not Likely to Adversely Affect conclusion was given.

However, construction of the I-26 widening project, I-4400/I-4700, is expected to result in unavoidable adverse effects to gray bat foraging and commuting habitat, particularly at the French Broad River crossing. Therefore, it is concluded that the proposed action "May Affect, Likely to Adversely Affect" gray bat. Incorporation of conservation measures into the project will offset some of those effects. These measures are consistent with the recovery objectives outlined in the recovery plan for the gray bat aiding particularly in the control of habitat destruction and research needs.

The *BO* issued by the Service concluded that "...implementing this project is not likely to jeopardize the continued existence of the gray bat nor will it have adverse impacts to critical habitat." This conclusion is based on "the current status of the gray bat; the environmental baseline for the action area; the effects of bridge construction, demolition, and highway widening; measures identified in the NCDOT's *BA* to help minimize the potential impacts of the proposed project and assist in the protection, management, and recovery of the species; any potential interrelated and interdependent actions associated with the proposed action; and any potential cumulative effects [of the project]."

In its Opinion the "USFWS determined that this level of take [project duration of more than five years] is not likely to result in jeopardy to the gray bat. In addition to the subsequent measures listed in the Reasonable and Prudent Measures and Terms and Conditions sections of [the *BO*], the measures listed in the Conservation Measures section of [the *BO*] must be implemented for this determination to remain valid."

Appalachian elktoe

NCDOT conducted additional surveys for other protected species in the project study area and found a previously undocumented occurrence of Appalachian elktoe in September 2017. NCDOT entered into formal consultation for the Appalachian elktoe.

The Appalachian elktoe is known to occur within a portion of the project study area, specifically the main stem of the French Broad River. Freshwater mussel surveys were completed June 13 through October 6, 2017 and the results of these surveys are included in the *Freshwater Mussel Survey Report* (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35-4_I-4400%20I-4700_Mussel%20Survey%20Report_20180109.pdf) (NCDOT, 2018).

The <u>BA</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/35_I-4400% 20I-4700_FINAL% 20I-26% 20Widening% 20BA% 2020180816_w% 20Appendices.pdf) prepared for this project also details the effects the project may have on the Appalachian elktoe.

While the Appalachian elktoe is currently rare in the French Broad River, the population appears to be expanding. The I-26 Widening is expected to result in unavoidable adverse effects to Appalachian elktoe. Therefore, it is concluded that the proposed action "May Affect, Likely to Adversely Affect" Appalachian elktoe. The direct and indirect adverse effects from this project as well as the changes to the environmental baseline should not preclude the expansion of the Appalachian elktoe through the Action Area. Incorporation of conservation measures into the project will offset some of the effects. These measures are consistent with the recovery objectives outlined in the USFWS recovery plan for the Appalachian elktoe and will help further facilitate the expansion of the French Broad River population.

The <u>BO</u> (https://xfer.services.ncdot.gov/PDEA/Web/I26Widening/final-eis/19_Appendix%20M_FINAL_BO_I-4400_I-4700%20w_%20CL.pdf) concluded that "...implementing this project is not likely to jeopardize the continued existence of the Appalachian elktoe nor will it have adverse impacts to critical habitat." This conclusion is based on "the current status of the Appalachian elktoe; the environmental baseline for the action area; the effects of bridge construction, demolition, and highway widening; measures identified in the NCDOT's BA to help minimize the potential impacts of the proposed project and assist in the protection, management, and recovery of the species; any potential interrelated and interdependent actions associated with the proposed action; and any potential cumulative effects [of the project]."

In its Opinion, "the USFWS has determined that this level of take [effects to approximately 1.04 acres of appropriate habitat] is not likely to result in jeopardy to the Appalachian elktoe. In addition to the subsequent measures listed in the Reasonable and Prudent Measures and Terms and Conditions sections of [the *BO*], the measures listed in the Conservation Measures section of [the *BO*] must be implemented for this determination to remain valid."

Other Required Authorizations

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

North Carolina Division of Water Resources (NCDWR): The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. A waiver will be deemed to occur if the NCDWR fails to act on this request for certification within sixty days of receipt of a complete application. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, Transportation Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for a 401 Certification should do so, in writing, by April 3, 2019 to:

NCDWR Central Office

Attention: Ms. Amy Chapman, Transportation Permitting Unit (USPS mailing address): 1617 Mail Service Center, Raleigh, NC 27699-1617

Or.

(Physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

North Carolina Division of Coastal Management (NCDCM):

Based upon all available information, the Corps has determined that this application for a Department of Army permit does not involve an activity which would affect the coastal zone, which is defined by the Coastal Zone Management (CZM) Act (16 U.S.C. § 1453).

Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information

The Corps of Engineers is soliciting comments from the public; federal, state and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, April 12, 2019. Comments should be submitted to Lori Beckwith, Regulatory Project Manager, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006, at (828) 271-7980, ext. 4223. Comments can also be emailed to loretta.a.beckwith@usace.army.mil.