



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: February 4, 2019
Comment Deadline: March 4, 2019
Corps Action ID Number: SAW-2006-20748
STIP Project No. U-4700

The Wilmington District, Corps of Engineers (Corps) has received an application from the North Carolina Department of Transportation (NCDOT) seeking Department of the Army (DA) authorization to discharge dredged or fill material into waters of the United States associated with the proposed widen US 321 to a six lane median divided facility from just north of the US 70 interchange in Hickory (Catawba County) to the Southwest Boulevard (SR 1933) interchange in Lenoir (Caldwell County), North Carolina [State Transportation Improvement Program (STIP) Number U-4700].

General plans and location information are described below and shown on the attached maps. This Public Notice and more detailed project plans are also available on the Wilmington District Web Site at under this Corps Action ID#: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Public-Notices/>

The Federal Highway Administration's (FHWA) Environmental Assessment (EA) and related maps for this project are available on the NCDOT website at:
<https://www.ncdot.gov/projects/us-321-hickory-lenoir/Pages/default.aspx>

Applicant: North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
Philip S. Harris III, P.E., C.P.M., Natural Environment Section Head
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Authority: The Corps will evaluate this application and a decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures under Section 404 of the Clean Water Act (33 U.S.C. 1344).

Location

The proposed project is located along US 321 from just north of the US 70 interchange in Hickory (Catawba County) to the Southwest Boulevard (SR 1933) intersection in Lenoir (Caldwell County). The proposed improvements involve approximately 14 miles of existing US 321 with a majority of the roadway located in Catawba and Caldwell Counties and 0.3 mile in Burke County. There are five municipalities that are located along the project corridor: City of Hickory, Town of Granite Falls, Town of Sawmills, Town of Hudson, and City of Lenoir (Figure 1).

Existing Site Conditions

The study area is located in both the piedmont and mountain physiographic regions of North Carolina. Topography in the project vicinity is characterized by very steep slopes and narrow ridges. Elevations in the study area range from approximately 980 to 1,280 feet above mean sea level. Land uses in the project vicinity consist of primarily commercial and residential interspersed with forested areas between developments and along stream corridors. Based on information contained in the United States Department of Agriculture Soil Survey data for Caldwell (1989), Burke (2006), and Catawba (1975) counties, the soils within the study area are composed of twenty-two soil types.

Waters impacted by this project area are located in the Catawba River Basin (HUC 03050101, within subbasin 03-08-32). No Outstanding Resource Waters, High Quality Waters, or Water Supply Waters (WS-I or WS-II) waters occur within 1.0 mile of the project area. Seven named streams as well as their unnamed tributaries are located within the impact area of this project (Table 1).

Wetland and stream determinations within U-4700 were conducted using the field delineation method outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the 2012 Eastern Mountains and Piedmont Supplement. The U.S. Army Corps of Engineers and the North Carolina Division of Water Resources (NCDWR) field verified the wetlands and surface waters on October 15, 2018.

Table 1 – Impacted project area streams

Stream Name	Stream Index Number	Best Usage Classification	Description
Frye Creek	11-54-1	WS-IV	From source to Horseford Creek
Catawba River (Lake Hickory)	11-(51), 11-(53)	WS-IV,B;CA	From Rhodhiss Dam to US 321 Bridge, From US 321 Bridge to NC 127
Gunpowder Creek	11-55-(4)	WS-IV; CA	From a point 0.8m downstream of Billy Branch to Catawba River (Lake Hickory)
Billy Branch	11-55-3	WS-IV	From source to Old Mill Pond, Gunpowder Creek
Little Gunpowder Creek	11-55-2-(2)	WS-IV	From US 321A to Gunpowder Creek
Gunpowder Creek	11-55-(1.5)	WS-IV	From a point 0.5m downstream of SR 1127 to a point 0.8m downstream of Billy
Gunpowder Creek	11-55-(0.5)	C	From source to a point 0.5m downstream of SR 1127
Brushy Fork	11-55-1-1	C	From source to Angley Creek
Angley Creek	11-55-1	C	From source to Gunpowder Creek

Gunpowder Creek (11-55-(1.5)) is currently listed on the North Carolina 2016 Final 303(d) list of impaired waters for having impaired benthos. The only unnamed tributary to this portion of Gunpowder Creek impacted within the project area is stream SAA within U-4700C and U-4700CB.

There are no trout waters or watersheds within the project area. Therefore, no moratoria are required for this project.

The project will not impact any designated Wild and Scenic Rivers or any rivers included in the list of Study Rivers (Public Law 90-542, as amended).

US 321 is classified as an urban principal arterial from US 70 in Hickory to 2nd Avenue in Hickory. From 2nd Avenue to Southwest Boulevard in Lenoir, US 321 is classified as a principal arterial on the Statewide Functional Classification System. The approximately 14 miles of proposed improvements for US 321 are from its junction with US 70 in Hickory, Catawba County to the Southwest Boulevard intersection in Lenoir, Caldwell County (see Figure 1). Catawba, Burke, and Caldwell Counties are located in Western North Carolina in the foothills of the Appalachian Mountains. Catawba, Burke, and Caldwell Counties are part of the Hickory-Morganton-Lenoir Metropolitan Statistical Area, the fourth largest MSA in North Carolina. This MSA has a population of over 300,000 people. The project area starts approximately 1 mile north of Interstate 40 in a commercial & industrial part of Hickory. The project moves north and crosses the Catawba River. The project passes through and terminates in a more rural area which is dotted with businesses, towns, communities, and farmlands.

The Western Piedmont Council of Governments is designated as the Lead Planning Agency for the Greater Hickory Metropolitan Planning Organization. The Greater Hickory MPO and NCDOT assist the four counties and 24 municipalities in developing a regional transportation plan. Planning efforts connect the entire region to develop a cohesive multi-modal transportation system.

Currently, US 321 is a four-lane highway with a 30-foot grass median and 4-foot paved shoulders. Median breaks have been provided at intersections and some large driveways. The existing right of way ranges from 150 to 700 feet in width. The right of way also varies from full control of access to no control of access. The posted speed limit on US 321 varies from 45 to 55 miles per hour within the project area. The project area contains two interchanges, 12 signalized intersections, and five grade separations across US 321.

Applicant's Stated Purpose

The purpose of the proposed project is to reduce congestion on US 321 in order to achieve a level of service (LOS) D or better in the Design Year 2040.

This purpose is based on the applicant's needs, as follows:

- Segments of US 321 between Hickory and Lenoir are currently experiencing congestion and operate at LOS E and F. Also, a majority of intersections along the project area currently operate at LOS E and F. In the Design Year (2035), 12 of 13 segments along the mainline and 16 of 18 intersections are projected to operate at LOS F.

Project Description

NCDOT proposes improvements to include the widening of US 321 from just north of the US 70 interchange in Hickory (Catawba County) to the Southwest Boulevard (SR 1933) interchange in Lenoir (Caldwell County). The proposed improvements involve approximately 14 miles of existing US 321 with a majority of the roadway located in Catawba and Caldwell Counties and 0.3 miles in Burke County.

The original limits of Project U-4700 were from US 70 in Hickory to US 64 in Lenoir. The northern terminus was changed in October 2015 from US 64 to Southwest Boulevard to provide additional time for the Department and the City of Lenoir to study alternatives at the US 321 with US 64/NC 18-90 intersection. Therefore, the project limits for U-4700 were shortened to Southwest Boulevard, a distance of 3.3 miles.

The project will be permitted in phases due to project size, funding and TIP schedule. Table 2 describes the proposed project sections and phasing. Department of the Army authorization for actual roadway construction is only being considered on Sections CA, CB and CC where final design has been completed and where all practicable measures to minimize impacts to waters and/or wetlands have been adopted. The proposed impacts for the remaining Sections A, B, and C are based on preliminary design. Preliminary design impacts have been calculated using preliminary slope stakes plus 25'. Work on those sections with preliminary design, as identified above, will only be authorized after all practicable measures to minimize impacts to jurisdiction aquatic resources have been adopted. Accordingly, NCDOT will be required to seek modifications to the existing permit, if issued, in order to commence work on the other sections of road identified above. Permit modification requests will be submitted as the final design is completed for each of the remaining sections (A-C) according to the phasing dates provided in Table 2.

Table 2 – Project phasing for US 321 Widening (U-4700)

Section	Approximate Section Limits	Approximate Length	Construction Letting
U-4700CA	SR 1160 (Mount Herman Road) Intersection Upgrade	N/A	Jun 2019
U-4700CB	SR 1809/1952 (Pine Mountain Road) Intersection	N/A	Jun 2019
U-4700CC	SR 1108 (Mission Road) Intersection Upgrade	N/A	Jun 2019
U-4700A	US 70 to US 321A	3.5 miles	Aug 2021
U-4700B	US 321A to SR 1108 (Mission Road)	7.2 miles	Jan 2030
U-4700C	SR 1108 (Mission Road) to SR 1933 (Southwest Blvd.)	3.3 miles	Jan 2030
TOTAL:		14 miles	

The preliminary projected impacts for the overall project will be approximately 0.7 acre of permanent wetland impacts, 5,950 linear feet of permanent stream impacts, and <0.01 acre of temporary stream impacts. Table's 3 and 4 contains a summary of the proposed jurisdictional wetland and stream resources by TIP section.

Table 3 – Summary of Wetland Impacts for U-4700

Section	Design Stage	Wetland Impact Type	Wetland Impact Area (ac)	Wetland Impacts Requiring Mitigation (lf)
U-4700A	Preliminary	Permanent Fill	0.1*	0.1
U-4700B	Preliminary	Permanent Fill	0.2*	0.2
U-4700C	Preliminary	Permanent Fill	0.4*	0.4
U-4700CA	Final	Permanent Fill	--	0
U-4700CB	Final	Permanent Fill	--	0
U-4700CC	Final	Permanent Fill	--	0
Total			0.7	0.7

* Preliminary impacts are calculated using slope stakes +25'

Table 4 – Summary of Stream Impacts for U-4700

Section	Design	Stream Impact Type	Impact Length	Temporary Impacts	Stream Impacts Requiring
U-4700A	Preliminary	Permanent Fill	1,795	--	1,795*
U-4700B	Preliminary	Permanent Fill	3,055	--	3,055*
U-4700C	Preliminary	Permanent Fill	1,000	--	1,000*
U-4700CA	Final	Permanent Fill	--	--	0
		Temporary	--	--	
U-4700CB	Final	Permanent Fill	100	--	100**
		Temporary	--	<0.01	
U-4700CC	Final	Permanent Fill	--	--	0
		Temporary	--	--	
Total			5,950	<0.01	5,950

* Preliminary impacts are calculated using slope stakes +25' (temporary impacts TBD)

** See Table 5

Avoidance and Minimization

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: NCDOT has avoided impacting many wetlands and streams, and reduced impacts to these resources to the greatest extent practicable. Information regarding the avoidance and minimization efforts with regard to Dwarf Flowered Heartleaf (DFHL) is detailed in the December 2018 Biological Assessment. Other specific examples of avoidance and minimization measures include:

- Shifted a U-turn bulb within U-4700CB further south to avoid impacts to a stream and wetland.
- Selected a 22 and 30-foot median rather than a 46-foot median typical section.
- Added a bridge and increased slopes on the Grace Chapel Flyover ramp at Station 14+98 to minimize stream impacts.

- Added several retaining walls near Falls Avenue (northbound off-ramp, southbound on-ramp, and northbound on-ramp) to minimize impacts to both streams and dwarf-flowered heartleaf.
- Re-aligned the connector road from the Alex Lee Boulevard interchange to Sage Meadow Circle to avoid stream impacts and minimize property impacts.
- Removed Dudley Shoals Road loop to minimize stream impacts and avoid impacts to historical resources.
- Slopes at CP2A Hydraulic Sites 3, 5, 6 and 11 will be steepened to minimize stream impacts.
- Steepened slopes in the vicinity of several populations of DFHL (population numbers 24, 26, 32, 36, 48, and 51) to minimize impacts to these plants.
- Steepened slopes and tightened buffer to avoid impacts to a DFHL conservation area.
- Expressway gutter was added in two locations to minimize impacts to property and a Duke Energy Substation.
- Best Management Practices will be utilized during construction to attempt to reduce the stormwater impacts to receiving streams and wetlands due to erosion and runoff.

Compensatory Mitigation

According to the applicant, the project has been designed to avoid and minimize impacts to jurisdictional areas throughout the National Environmental Policy Act (NEPA) and design processes. However, project impacts will necessitate compensatory mitigation to offset unavoidable functional loss to the aquatic environment. It has been determined that onsite mitigation is not an option for this project and the North Carolina Division of Mitigation Services will provide all required mitigation for these sections. Mitigation acceptance letters were submitted with the permit package for Section A (preliminary design) and Section CB (final design impacts), however compensatory mitigation will be provided for Sections B and C after final design is completed.

Cultural Resources

The FHWA is the lead federal agency for this project and, in accordance with Section 106 of the National Historic Preservation Act (NHPA), is the federal agency responsible for making determinations and when required, requesting concurrence with these determinations from the North Carolina State Historic Preservation Office (SHPO). Any adverse effects to historic resources would be resolved through execution of a memorandum of agreement.

Archaeological and Historic Architectural Resources:

Representatives of the SHPO, FHWA, and NCDOT met on March 10, 2015 and reached concurrence on effects to three resources based on the early project design.

- Houck’s Chapel (CT0180 – NR) – No Adverse Effect with Commitments
- G. Haywood Hartley House (CW0231 – DE) – No Effect
- James Edgar Broyhill Estate (CW0251 – DE) – No Adverse Effect with Commitments

Following design changes and additional investigations of an expanded study area, a second effects consultation on March 20, 2018, established the final findings for the three resources above and one additional resource:

- Houck’s Chapel (CT0180 – NR) – No Effect
- G. Haywood Hartley House (CW0231 – DE) – No Effect
- James Edgar Broyhill Estate (CW0251 – DE) – No Adverse Effect with Commitments
- Julius V. Stirewalt Farm (CW0832 – DE) – No Effect

If a Corps permit is issued for this project, the commitments for a finding of No Adverse Effect would be included as a special condition of the permit.

The archaeological survey within the Area of Potential Effects (APE) was completed on July 24, 2015, and the results showed that none of the fifteen evaluated sites were determined to be eligible for the NRHP under any criteria and that no further work was necessary. The SHPO concurred via letter December 22, 2015. Supplemental archaeological field investigations were completed on August 30, 2017 to capture an expanded APE. No new sites were identified.

Endangered Species

The FHWA is the lead federal agency for this project and is the federal agency responsible for making determinations and requesting concurrence, when required, with these determinations from the US Fish and Wildlife Service (USFWS), in accordance with Section 7(a)(2) of the Endangered Species Act (ESA). Table 5 contains the federally listed threatened and endangered species for the 3 counties within the project area. It also includes the FHWA’s determinations of effect to these species that would result from implementation of the project.

Table 5 – Federally protected species listed for Catawba, Burke, and Caldwell Counties

Scientific Name	Common Name	County*	Federal Status**	Habitat Present	Biological Conclusion
<i>Clemmys muhlenbergii</i>	Bog turtle	B, Ca	T (S/A)	N/A	Not Required
<i>Glaucomys sabrinus coloratus</i>	Carolina northern flying squirrel	Ca	E	No	No Effect
<i>Myotis septentrionalis</i>	Northern long-eared bat	Ct, B, Ca	T	Yes	1
<i>Corynorhinus townsendii virginianus</i>	Virginia big-eared bat	Ca	E	No	No Effect
<i>Microhexura montivaga</i>	Spruce-fir moss spider	Ca	E	No	No Effect

<i>Hexastylis naniflora</i>	Dwarf-flowered heartleaf	Ct, B, Ca	T	Yes	MALAA ²
<i>Liatris helleri</i>	Heller's blazing star	B, Ca	T	No	No Effect
<i>Hudsonia montana</i>	Mountain golden heather	B	T	No	No Effect
<i>Hedyotis purpurea</i> var. <i>montana</i>	Roan mountain bluet	Ca	E	No	No Effect
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	Ct	E	Yes	No Effect
<i>Isotria medeoloides</i>	Small whorled pogonia	B	T	Yes	No Effect
<i>Geum radiatum</i>	Spreading avens	B	E	No	No Effect
<i>Sisyrinchium dichotomum</i>	White irisette	B	E	Yes	No Effect
<i>Gymnoderma lineare</i>	Rock gnome lichen	B	E	No	No Effect

*Ct – Catawba County, B – Burke County, Ca – Caldwell County

**T(S/A) – Threatened due to similarity of appearance, T – Threatened, E – Endangered

1 – Northern long-eared bat is consistent with the 4(d) rule

2 – May Affect, Likely to Adversely Affect

Below is a summary of species with habitat in the project area:

Northern long-eared bat: A memo documenting that NCDOT has satisfied the 4(d) requirements for this project with regard to this species was sent to USFWS on November 9, 2017.

Dwarf-flowered heartleaf: Multiple populations of dwarf-flowered heartleaf (DFHL) are present within the project area and Formal Section 7 Consultation was necessary for this species. A Biological Assessment (BA) was distributed for comment on November 30, 2018 and was submitted on December 20, 2018. It is anticipated that the USFWS will issue a Biological Opinion (BO) concurring with the biological conclusion of "May Affect, Likely to Adversely Affect" for this species, however the Corps cannot make a permit decision until the consultation process is complete.

Schweinitz's sunflower: Walking visual surveys of all areas of potential habitat within Catawba County were conducted in September 2013, October 2015 and September 2018. No individuals of this species were identified within the project area and there are no known occurrences within 1.0 mile of the project.

Small whorled pogonia: Walking visual surveys of all areas of potential habitat within Burke County were conducted in June 2009, July 2013, and June 2018. No individuals of this species were identified within the project area and there are no known occurrences within 1.0 mile of the project.

White Irisette: Walking visual surveys of all areas of potential habitat within Burke County were conducted in July 2013, and June 2018. No individuals of this species were identified within the project area and there are no known occurrences within 1.0 mile of the project.

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps agrees that the proposed project may affect, likely to adversely affect a federally listed endangered or threatened species or their formally designated critical habitat (Dwarf-flowered heartleaf). Consultation has been initiated with the USFWS by FHWA and a Biological Assessment was submitted on December 20, 2018, and as stated above, the Corps will not make a permit decision until the consultation process is complete.

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 March 4, 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

Evaluation

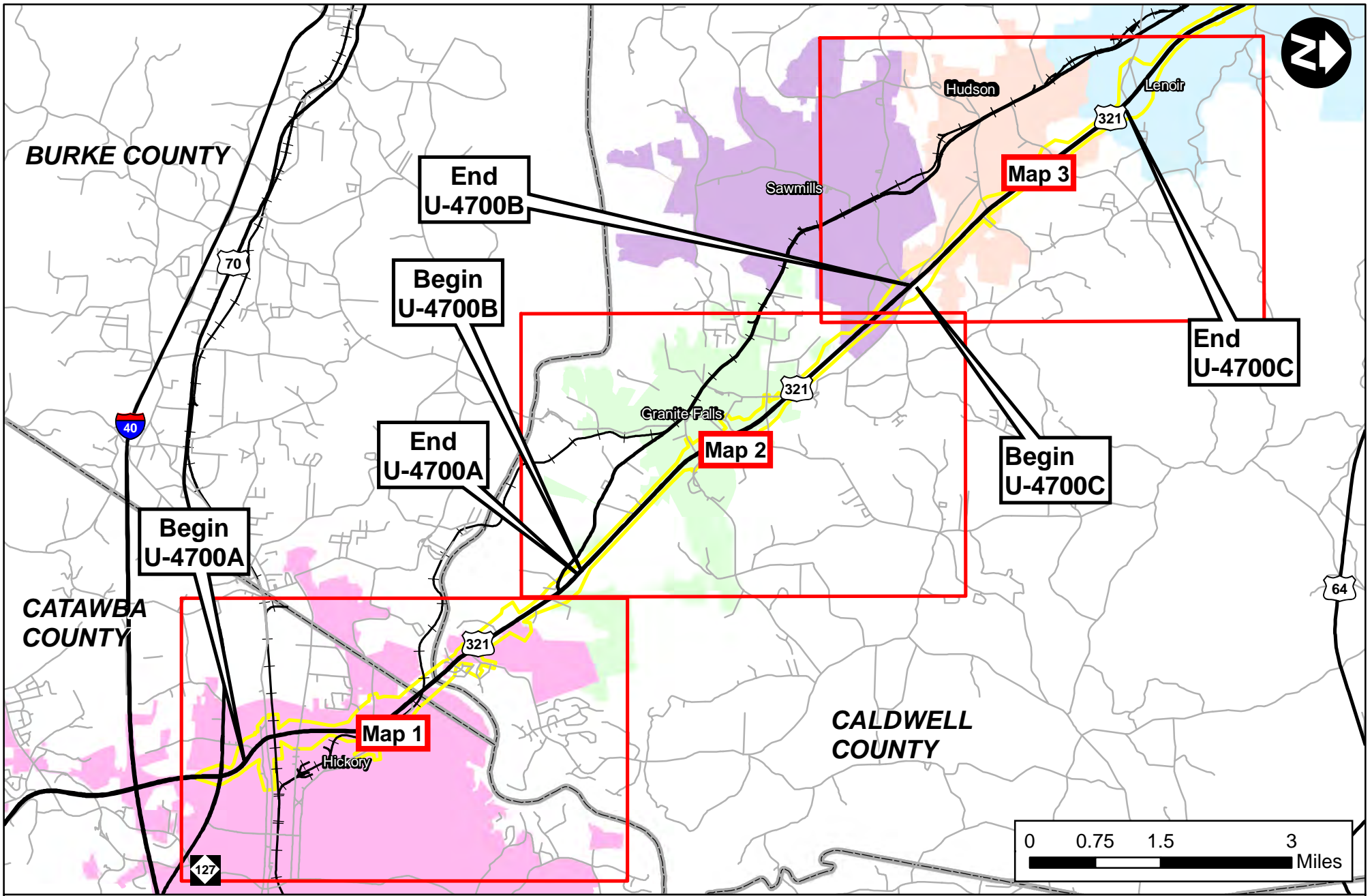
The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably 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 USACE to select the LEDPA 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 a Corps of Engineers EA and/or an Environmental Impact Statement pursuant to NEPA. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, March 4, 2019. Written comments should be submitted to Mr. Steve Kichefski, US Army Corps of Engineers, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, NC 28801-5006, telephone (828) 271-7980, ext. 4234. Written comments can also be submitted by email to: steven.l.kichefski@usace.army.mil

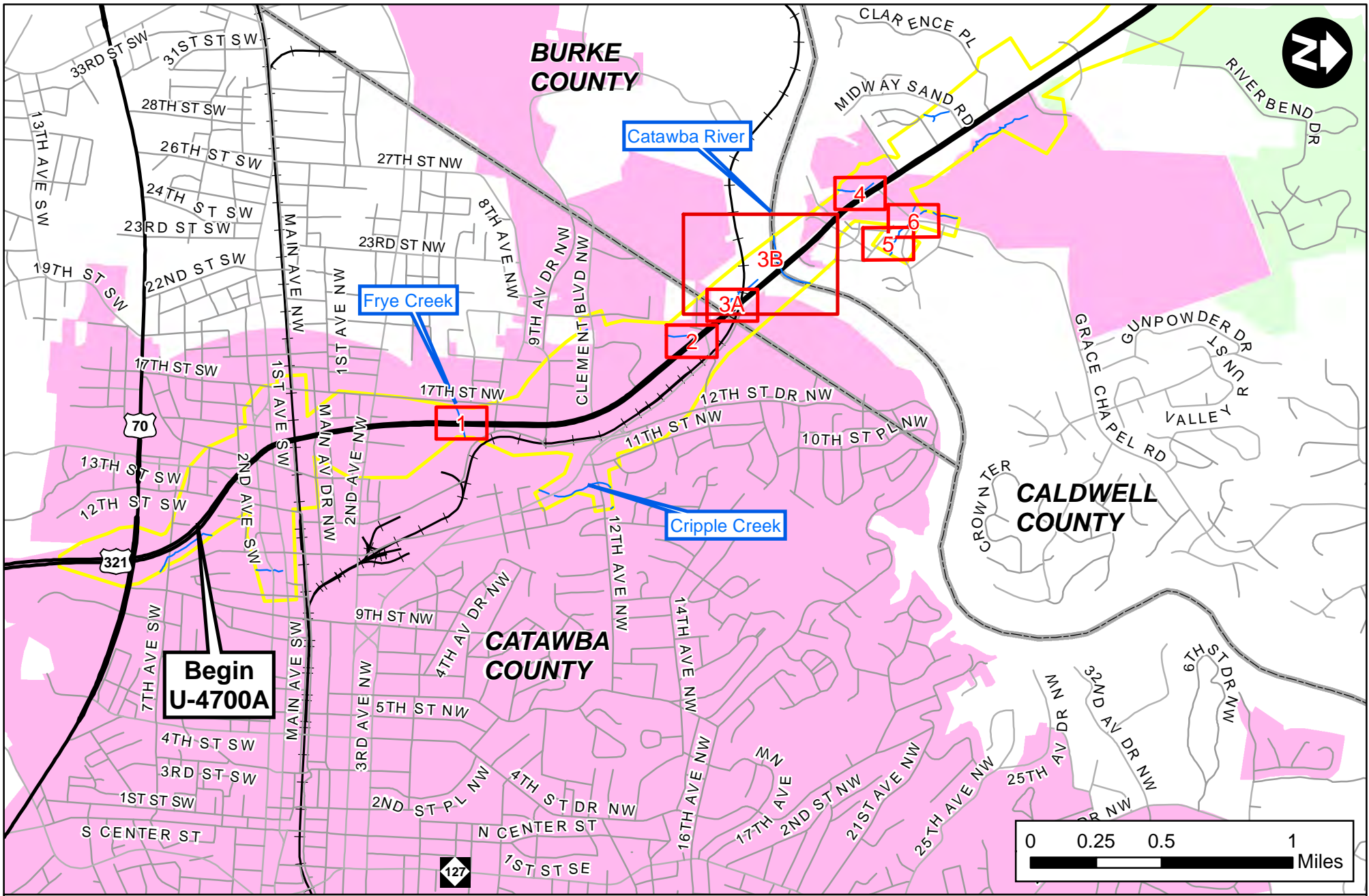


- Town of Granite Falls
- City of Hickory
- Town of Hudson
- City of Lenoir
- Town of Sawmills
- U-4700 Project Area

U-4700 - U.S. 321 Widening

**Project Overview
Impacts to Jurisdictional Resources**

Burke, Caldwell, and Catawba Counties



**Begin
U-4700A**



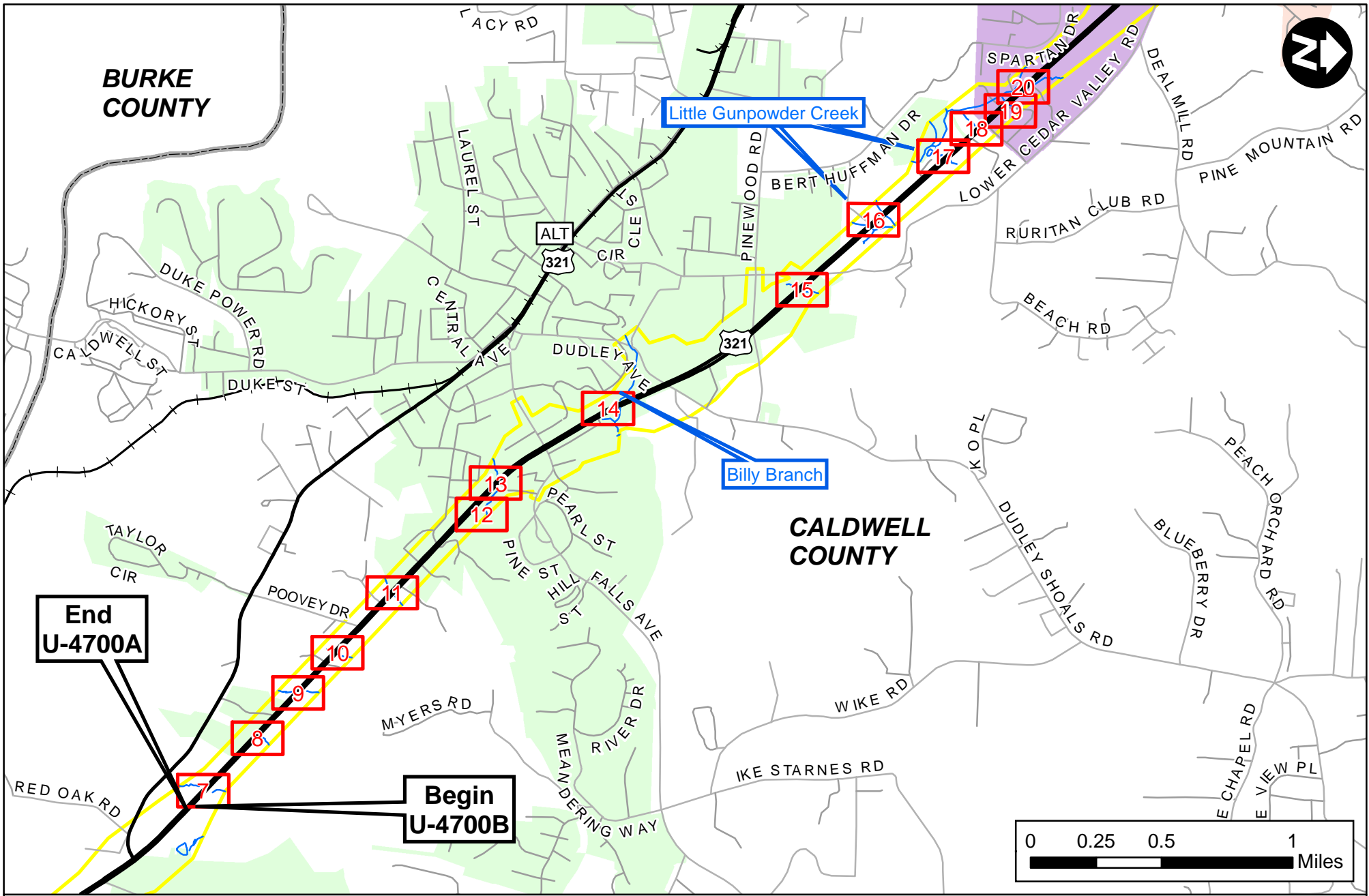
- Delineated Stream
- Town of Granite Falls
- City of Hickory
- U-4700 Project Area
- Permit Figure Extents 1-29

U-4700 - U.S. 321 Widening

Map 1

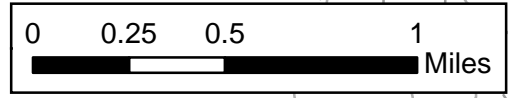
Impacts to Jurisdictional Resources

Catawba, Burke, and Caldwell Counties



**End
U-4700A**

**Begin
U-4700B**

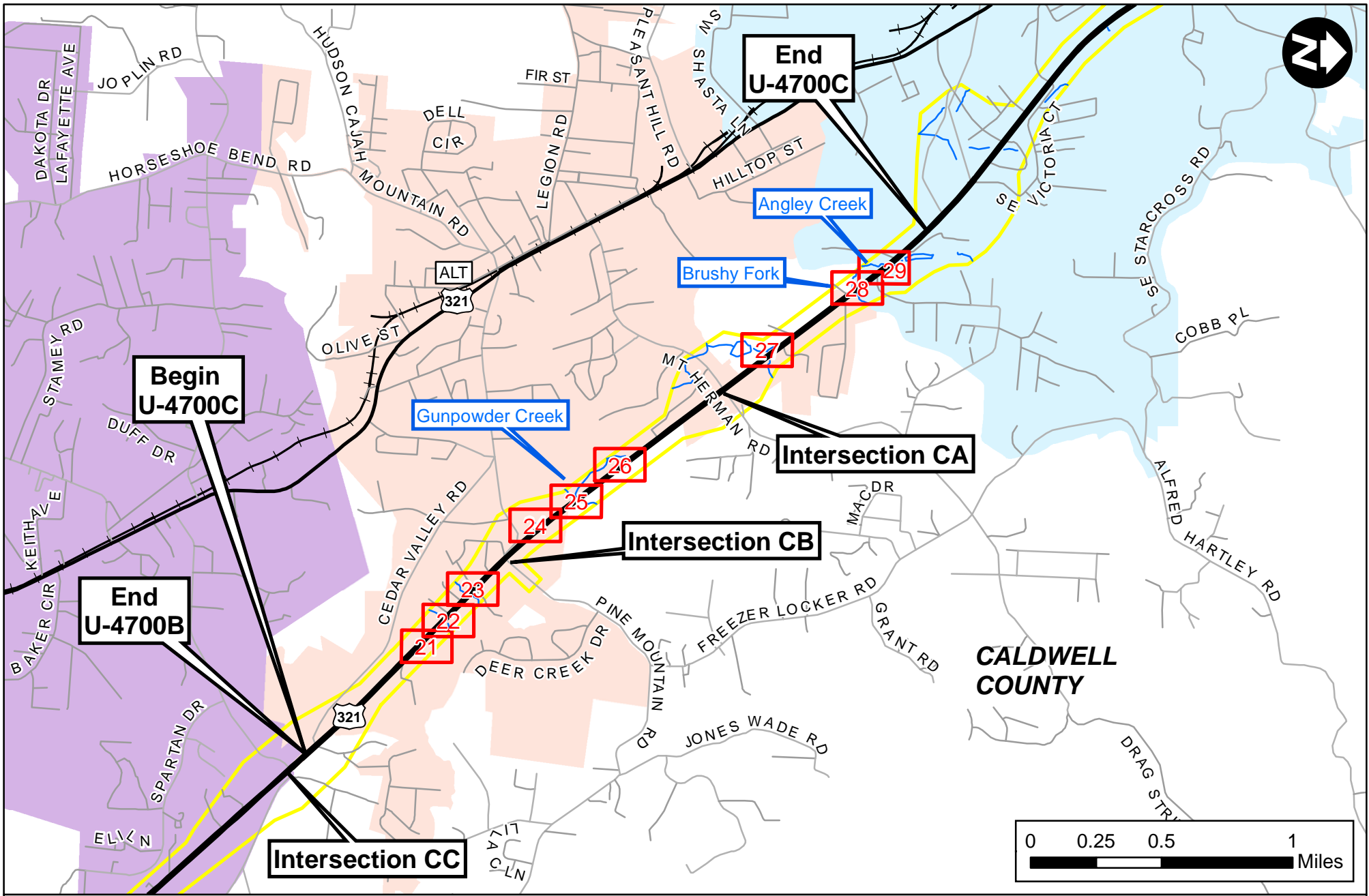


- Delineated Stream
- Town of Granite Falls
- Town of Hudson
- Town of Sawmills
- U-4700 Project Area
- Permit Figure Extents 1-29

U-4700 - U.S. 321 Widening

**Map 2
Impacts to Jurisdictional Resources**

Burke and Caldwell Counties



- Delineated Stream
- Town of Hudson
- City of Lenoir
- Town of Sawmills
- U-4700 Project Area
- Permit Figure Extents 1-29

U-4700 - U.S. 321 Widening
Map 3
Impacts to Jurisdictional Resources
Caldwell County