



US Army Corps  
Of Engineers  
Wilmington District

# PUBLIC NOTICE

Issue Date: January 9, 2018  
Comment Deadline: February 7, 2018  
Corps Action ID #: 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) regarding a potential future requirement for Department of the Army (DA) authorization to discharge dredged or fill material into waters of the United States associated with the proposed widening of 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), North Carolina [State Transportation Improvement Program (STIP) Number U-4700].

Specific interchange configuration, roadway alignment alternatives, and location information are described below and shown on the attached maps. This Public Notice and attachments are also available on the Wilmington District Web Site at:

<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/us321widening/>

**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 to compare alternatives that have been carried forward for detailed study pursuant to applicable procedures of Section 404 of the Clean Water Act (33 U.S.C. 1344).

In order to more fully integrate Section 404 permit requirements with the National Environmental Policy Act of 1969 (NEPA), and to give careful consideration to our required public interest review and 404(b)(1) compliance determination, the Corps is soliciting public comment on the merits of this proposal and on the alternatives as evaluated in the February 2016 FHWA EA and 2017 alternative updates. At the close of this comment period, the District Commander will evaluate and consider the comments received, as well as the expected adverse and beneficial effects of the proposed road construction, to select the least environmentally damaging practicable alternative (LEDPA). The District Commander is not authorizing

construction of the proposed project at this time. A final DA permit may be issued only after our review process is complete, impacts to the aquatic environment have been minimized to the maximum extent practicable, and a compensatory mitigation plan for unavoidable impacts has been approved.

**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 project encompasses approximately 13.5 miles of existing US 321 with the majority of the roadway located in Catawba and Caldwell Counties and 0.3 miles in Burke County. There are five municipalities that border the project area: 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.

Water resources in the study area are part of the Catawba River basin (U.S. Geological Survey (USGS) Hydrologic Units 03050101 and 03050102). The project study corridor crosses the Catawba River at Lake Hickory. In addition to the Catawba River, there are eight USGS-named streams and 36 unnamed tributaries within the project study area (USGS-named streams are listed on the table below). There are five ponds located in the study area. Three of these ponds are hydrologically connected to a jurisdictional stream feature.

**Table 1: Water Resources in the Study Area**

<b>USGS-Named Stream</b>	<b>DWQ Stream Index No.</b>	<b>Best Usage Classification</b>
Geitner Branch*	11-129-1-18	C
Frye Creek	11-54-1	WS-IV
Catawba River	11-(53); 11-(51)	WS-IV, B, CA
Gunpowder Creek	11-55-(4)	WS-IV; CA
Billy Branch	11-55-3	WS-IV
Gunpowder Creek	11-55-(1.5)	WS-IV
Little Gunpowder Creek	11-55-2-(2)	WS-IV
Angle Creek, including pond	11-55-1	C
Brushy Fork	11-55-1-1	C
Cripple Creek	11-54-2	WS-IV

\* A tributary of Geitner Branch is within the Study Area.

NCDWR classifies surface waters of the state based on their intended best uses. Angley Creek, Brushy Fork, Geitner Branch, Gunpowder Creek (upstream of SR 1127), and the stream's associated tributaries are classified as *Class C* waters within the project.

The Catawba River, Billy Branch, Cripple Creek, Frye Creek, Little Gunpowder Creek, Gunpowder Creek (downstream of SR 1127 to its confluence with Billy Branch) and their associated tributaries are classified as *Water Supply-IV (WS-IV)* waters. The Catawba River, Gunpowder Creek (downstream of its confluence with Billy Branch), and their associated tributaries within the project are also assigned a supplemental classification as waters in *Critical Areas (CA)*. This supplemental designation includes critical areas adjacent to a water supply intake or reservoir where risk associated with pollution is greater than from the remaining portions of the watershed. Special restrictions are placed on streams designed as *CA* due to their proximity to a water supply source. The Catawba River and its tributaries located in the project area are also classified as *B* waters.

Gunpowder Creek (Old Mill Pond), SIN/AU 11-55-(1.5) is listed on the North Carolina 2014 Final 303(d) list for Benthos Fair (Nar, AL, FW).

No streams within the project study area are designated as Trout Waters.

The N.C. Division of Marine Fisheries does not designate any streams within the project study area as supporting anadromous fish or serving as primary nursery areas. In addition, NCDWR does not designate any streams within the project study area or 1.0 mile downstream of the project study area as High Quality Waters or Outstanding Resource Waters.

US 321 is classified as an urban principal arterial from US 70 in Hickory to 2<sup>nd</sup> 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 13.5 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 13.5 miles of existing US 321 with a majority of the roadway located in Catawba and Caldwell Counties and 0.3 miles in Burke County.

### **Detailed Study Alternatives**

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. The project limits for U-4700 were shortened to Southwest Boulevard, a distance of 3.3 miles.

In consideration of the right-of-way impacts, environmental constraints, and sound engineering principles, the Merger Process Team agreed at the October 20, 2009 meeting for Concurrence Point 2 (Detailed Study Alternatives Carried Forward) to the "Best Fit" Widening Alternative. This was reconfirmed for the new project limits at a Merger meeting on October 14, 2015. This alternative will widen US 321 at locations that "best fit" the current road location and surrounding land uses. "Best fit" locations were evaluated and selected to improve the existing roadway alignment, minimize impacts, and permit traffic maintenance during construction. This

best fit alignment that was carried forward as of October 2015 and with the new project length, was broken into Segments (A through E – for design purposes, not for STIP funding) and a choice of three typical sections were analyzed for each. NCDOT also investigated several different interchange alternatives.

The refined alternatives were presented at public hearings in July 2016. Then, the traffic forecast was updated in January 2017 because the previous forecast update had been in 2011 and since that time, the road network and funded project list had changed. Another public meeting was held in July 2017 with design revisions based on public input from the 2016 Public Hearing, as well as, the updated traffic forecast. During this hearing, many written comments were received and most expressed concern over the Grace Chapel Road Superstreet intersection. Based on this public input, design revisions were made and presented to the public in October 2017. Also in 2017 NCDOT eliminated one of the typical sections being studied. The following typical sections and interchanges are being evaluated.

**Typical Section Alternatives**

**Typical Section 1:** Six-lane divided with 22-foot raised median with a concrete barrier with curb and gutter in outside lanes

**Typical Section 2:** Six-lane divided with 30-foot raised grassed median with curb and gutter in median and grassed shoulder

Multiple options were considered at several intersection and interchange locations, listed in the table below. NCDOT recommendations are in bold.

**Table 2: Interchange Alternative Locations**

<b>Location</b>	<b>Alternatives Considered</b>
13th Street SW	June 2016: Interchange at 13th Street SW proposed July 2017 / October 2017: <b>Interchange design shifted to 2nd Avenue SW</b>
Clement Boulevard	June 2016: Interchange design proposed July 2017 / October 2017: <b>Superstreet design proposed</b>
Grace Chapel Road	June 2016: Three alternatives presented – flyover, trumpet interchange, reverse Superstreet intersection July 2017: A traditional Superstreet intersection alternative is added October 2017: <b>Flyover design proposed, and was modified from the original flyover design to reduce impacts</b>
Alex Lee Boulevard	June 2016: Superstreet intersection proposed July 2017: Trumpet interchange proposed October 2017: <b>Tight diamond interchange proposed</b>

Falls Avenue	June 2016 / July 2017: Three alternatives presented – tight diamond interchange, partial clover interchange, and superstreet intersection. October 2017: <b>Tight diamond interchange proposed</b>
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NOTE: Alternatives **bolded** are recommended by NCDOT

### No-Build Alternative

In addition to the Best Fit Alternatives (i.e., Detailed Study Alternatives), a No-Build Alternative was evaluated for the project. The No-Build Alternative offers limited improvements to the project study area and assumes that all other projects currently planned or programmed in the STIP will be constructed in the area as proposed. These improvements include continued roadway maintenance and minor improvements on US 321. As such, they would not improve capacity within the study area and thus the FHWA and NCDOT have proposed that the No-Build Alternative would not meet the purpose of or need for this project.

### Impacts to waters of the US

Permanent impacts to waters of the US (streams) for the Detailed Study Alternatives are listed in Table 4 below. The majority of these impacts would result from the construction/placement of culverts and culvert extensions. The impact estimates were calculated based on functional roadway design slope stake limits plus 25 feet.

The table below summarizes anticipated stream and wetland impacts for the alternatives considered. NCDOT recommendations are in bold.

**Table 3: Summary of Stream and Wetland Impacts for Studied Alternatives**

Section	Alternative	Stream Impacts	Wetland Impacts	Notes
13th St SW and 2nd Ave SW	13th St SW	0	0	Shifting the interchange improves access to downtown Hickory. Relocations are anticipated to be approximately the same. NCDOT proposes additional pedestrian connectivity to address potential EJ concerns.
	<b>2nd Ave SW Interchange</b>	<b>0</b>	<b>0</b>	
Clement Blvd	Interchange	1,110	0.1	The recommended superstreet intersection reduces relocations to approximately 30 businesses.
	<b>Superstreet</b>	<b>860</b>	<b>0.1</b>	
Grace	<b>Flyover</b>	<b>960</b>	<b>0</b>	NCDOT recommends the flyover because of substantial public opposition to the other
	Trumpet	760	0	

Chapel Rd2	Superstreet/ Reverse Superstreet	610	0	options. Approximately 85 individuals commented specifically on the Grace Chapel Road intersection following the July 2017 Meeting. The largest group, approximately 28 individuals, specifically expressed preference for a flyover or interchange.
Alex Lee Blvd2	Trumpet	0	0	
	Superstreet	0	0	
	<b>Tight Diamond</b>	<b>0</b>	<b>0</b>	
<b>Between Alex Lee Blvd and Falls Ave</b>		<b>1,040</b>	<b>0</b>	
Falls Ave	Partial Clover	2,160	0	NCDOT recommends the tight diamond interchange because of access and connectivity benefits for residents and emergency vehicles.
	<i>Superstreet</i>	<i>1,940</i>	<i>0</i>	
	<b>Tight Diamond</b>	<b>2,340</b>	<b>0</b>	
<b>Between Falls Ave and Southwest Blvd</b>		<b>2,580</b>	<b>0.6</b>	
<b>Recommended Alternative Total</b>		<b>7,780</b>	<b>0.7</b>	

1. Impacts to the banks of the Catawba River (Lake Hickory) are not anticipated since it will be spanned with new bridges.
2. Additional stream and wetland impacts possible. Future field investigations will be performed to identify potential water resources.

## 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 requesting concurrence with these determinations from the North Carolina State Historic Preservation Office (HPO). Any adverse effects to historic resources would be resolved through execution of a memorandum of agreement.

### Architectural Resources

Two resources within the project study area were found to be listed on or eligible for listing on the National Register of Historic Places (NRHP). These resources are the Houck's Chapel (CT180) and the G. Haywood Hartley House (CW231). On March 10, 2015, representatives from FHWA, NCDOT, and HPO reached the following concurrence on the assessment of effects for the preliminary design.

- Houck's Chapel – No Adverse Effect with Conditions.
- G. Haywood Hartley House – No Effect

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

Section 4(f) of the Department of Transportation Act of 1966 provides protection to historic properties, public parks, and recreation areas. There are no Section 6(f) properties located within the proposed project corridor; therefore, no Section 6(f) properties will be impacted by this project.

### Archaeological Resources

According to the NCDOT, the archaeological survey within the Area of Potential Effects (APE) was completed on July 24, 2015, and the results submitted to NCDOT as a management summary on August 7, 2015, and as a revised draft report on November 16, 2015. The survey identified seven new archaeological sites (31CT259, 31CW464, 31CW465, 31CW470, 31CW472, 31CW474, and 31CW476) and eight isolated finds (31CW466, 31CW467, 31CW468, 31CW469, 31CW471, 31CW473, 31CW475, and 31CW477). Thirteen (31CT259, 31CW464, 31CW465, 31CW466, 31CW467, 31CW468, 31CW469, 31CW470, 31CW471, 31CW473, 31CW474, 31CW475, and 31CW477) of the identified resources were evaluated in their entirety.

They are not significant under any of the NRHP eligibility criteria. As a result, these resources were determined not eligible for the NRHP and no additional archaeological investigations of these resources in association with this project are required. The parts of the remaining two sites (31CW472 and 31CW476) within the project's APE also lack research potential. The investigated sections of these two sites within the APE were determined to be not eligible for the NRHP under any criteria with no further work necessary, but both sites extend outside the APE. The NRHP-eligibility of those sections outside the APE is considered unassessed. Additional subsurface survey to further evaluate the extended portions of these two sites outside the APE might be necessary if any project changes were to result in an expansion of the APE at these locations.

The results of the archaeological investigation were to be submitted to the SHPO for their review and comment.

### **Endangered Species**

The FHWA is the lead federal agency for this project and is the federal agency responsible for making determinations and requesting concurrence 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 counties within the study area. It also includes the FHWA's determinations of effect to these species that would result from implementation of the Detailed Study Alternatives.



**Table 4. Federally Protected Species Listed for Counties in the Study Area**

Scientific Name	Common Name	County	Federal Status	Habitat Present	Biological Conclusion
<i>Glyptemys-muhlenbergii</i>	Bog Turtle	Burke, Caldwell	T(S/A)	No	Not Required
<i>Glaucomys sabrinus coloratus</i>	Carolina northern flying squirrel	Caldwell	E	No	No Effect
<i>Corynorhinus townsendii</i>	Virginia big-eared bat	Caldwell	E	Unknown	Unresolved
<i>Myotis septentrionalis</i>	Northern long-eared bat	Burke, Caldwell, Catawba	T	Yes	Unresolved
<i>Microhexura montivaga</i>	Spruce-fir moss spider	Caldwell	E	No	No Effect
<i>Gymnoderma lineare</i>	Rock gnome lichen	Burke	E	No	No Effect
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	Catawba	E	Yes	No Effect
<i>Hexastylis naniflora</i>	Dwarf-flowered heartleaf	Burke, Caldwell, Catawba	T	Yes	May Affect, Likely to Adversely Affect
<i>Liatrix helleri</i>	Heller's blazing star	Burke, Caldwell	T	No	No Effect
<i>Hudsonia montana</i>	Mountain golden-heather	Burke	T	No	No Effect
<i>Isotria medeoloides</i>	Small whorled pogonia	Burke	T	Yes	No Effect
<i>Sisyrinchium dichotomum</i>	White irisette	Burke	E	Yes	No Effect
<i>Geum radiatum</i>	Spreading avens	Burke	E	No	No Effect

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

## 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.

### **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 US NCDOT will investigate potential on-site stream and wetland mitigation opportunities once a preferred alternative has been chosen. If on-site mitigation is not feasible, or a sufficient amount of mitigation is not available on-site, mitigation will be provided by the NC Division of Mitigation Services (NCDMS).

### **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 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 (EIS) 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, February 7, 2018. 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:

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