



US Army Corps  
Of Engineers  
Wilmington District

# PUBLIC NOTICE

Issue Date: March 28, 2013  
Comment Deadline: April 12, 2013  
Corps Action ID #: SAW-2008-03229  
TIP Project No. I-3802/I-3610/B-5365

The Wilmington District, Corps of (Corps) issued a Public Notice on February 19, 2013, concerning an application received 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 improvements and widening of I-85 and interchange improvements from north of NC73 in Cabarrus County to the US 29-601 Connector in Rowan County, North Carolina. Subsequent to comments and review of the referenced Public Notice, it was discovered the initial Public Notice contained an error with reference to the National Environmental Policy Act of 1969 (NEPA) document being prepared by the Federal Highway Administration (FHWA) for the project. The initial Public Notice stated that the FHWA in compliance with NEPA processing was evaluating project alternatives for the project through an Environmental Assessment (EA). The statement was incorrect in that FHWA is conducting their NEPA process review by processing a Categorical Exclusion (CE) document for the proposed project. The purpose of this Public Notice is to identify this error and offer an opportunity to comment for commenting agencies.

Specific alignment alternatives and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at:

<http://www.saw.usace.army.mil/missions/RegulatoryPermitProgram.aspx>

**Applicant:** North Carolina Department of Transportation (NCDOT)  
Project Development and Environmental Analysis Branch  
Attn: Dr. Gregory J. Thorpe, Manager  
1548 Mail Service Center  
Raleigh, NC 27699

## Authority

The Corps will evaluate this application to compare alternatives that have been carried forward for detailed study pursuant to applicable procedures of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (33 U.S.C. 1344).

In order to more fully integrate Section 10 and Section 404 permit requirements with the National Environmental Policy Act of 1969, 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 evaluated in the Federal Highway Administration (FHWA) Categorical Exclusion (CE) that has been prepared and expected to be signed in July 2013. 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 area stretches along existing I-85 from north of NC 73 in Cabarrus County to the US 29-601 Connector in Rowan County, North Carolina. The total distance for this project is 13.5 miles. Water resources within the project area are part of the Upper Pee Dee Basin (Hydrologic Unit 03040105) and Lower Yadkin Basin (Hydrologic Unit 03040103). Named streams within the project area include Cold Water Creek and Irish Buffalo Creek in the Upper Pee Dee Basin and Town Creek in the Lower Yadkin Basin. The approximate midpoint of the project is located at Latitude 35.477019 N, Longitude - 80.5790540 W.

### **Existing Site Conditions**

The study area is located in the Piedmont physiographic province of North Carolina with topography characterized as gently sloping in the stream valleys of Cold Water Creek along the existing I-85. Existing land use in the project area is a mixture of business and residential. Land adjacent to I-85 is predominantly agricultural or undeveloped. Small retail, gasoline, and other service-type business are common at interchanges. In some portions of the study area, there is dense development, including big box retail, particularly south of Dale Earnhardt Boulevard in Cabarrus County. North of Dale Earnhardt Boulevard, land adjacent to I-85 is predominantly undeveloped. The existing roadway consists of a four lane, median-divided freeway with usable shoulders.

Water resources within the project area are part of the Upper Pee Dee Basin (Hydrologic Unit 03040105) and Lower Yadkin Basin (Hydrologic Unit 03040103). Named streams within the project area include Cold Water Creek and Irish Buffalo Creek in the Upper Pee Dee Basin and Town Creek in the Lower Yadkin Basin. A total of 89 jurisdictional streams were identified within the study area as well as approximately 45 jurisdictional wetlands adjacent to these streams.

## **Applicant's Stated Purpose**

The primary purpose of the proposed project is to improve level of service (LOS) on I-85 and its interchanges in the project area. The proposed project addresses a “bottleneck” created by the construction of TIP Project No. I-3803 to the south and TIP Project No. I-2511 to the north. The projects increased the number of travel lanes on I-85 to eight lanes in Mecklenburg County and Rowan County, respectively.

Reconstructing the interchange at US 29-601 Connector and NC 152, which connects the two US highways to I-85, will allow it to meet current design standards and replace a structurally deficient bridge. Modifications also would improve overall traffic operations at the interchange.

## **Project Description**

The North Carolina Department of Transportation and Federal Highway Administration propose to reconstruct and widen I-85 to an eight-lane freeway from NC 73 in Cabarrus County, North Carolina to US 29-601 Connector in Rowan County, North Carolina. The total distance for this project is 13.5 miles.

For I-3802, NCDOT proposes to add four additional travel lanes to I-85 from north of NC 73 in Cabarrus County to US 29-601 Connector in Rowan County. The project involves widening the existing four-lane freeway to eight lanes, matching TIP projects I-3803 at NC 73 to the south, and I-2511 at US 29-601 to the north. Interchange improvements, including reconstruction of existing structures to meet current design standards for vertical clearance, are proposed at US 29-601, SR 2126 (Dale Earnhardt Boulevard) and SR 2180 (Lane Street). The project is divided into two sections for construction phasing – Section A extends from NC 73 to Lane Street and Section B extends from Lane Street to US 29-601 Connector.

For TIP Project Number I-3610, NCDOT proposes to reconstruct the existing cloverleaf interchange at NC 152 and US 29-601, reconstruct the interchange at NC 152 and I-85, and improve existing NC 152, which provides access to I-85 between the two interchanges.

For TIP Project Number B-5365, NCDOT proposes to replace Bridge No. 21 and Bridge No. 34 over the Norfolk Southern Railroad and US 29 in China Grove.

## **Detailed Study Alternatives**

The range of alternatives that have been considered include the No-Build Alternative, Alternate Modes of Transportation, a Transportation Systems Management (TSM) Alternative, New Location Alternative, and Improvements to the Existing Facility (preferred).

The Improving the Existing Facility/ Best-Fit Widening alternative assumes that existing I-85 between NC 73 and US 29-601 Connector would be reconstructed and widen in the existing median to four lanes in each direction. Auxiliary lanes are proposed on I-85 between US 29-601 and Dale Earnhardt Boulevard and between Dale Earnhardt Boulevard and Lane Street. Minor widening, generally within NCDOT right of way, could also be required to the outside of the existing lanes and at interchange locations. In these areas, widening could extend outside of the right of way. In addition, interchange improvements are proposed at US 29-601, Dale Earnhardt Boulevard, Lane Street, and NC 152. Improvements are also proposed at the interchange of US 29-601 Connector and NC 152.

The methodology for developing interchange configurations and selecting a preferred interchange configuration involved a four-tier approach. The tiered approach included a design sketch planning exercise, an initial screening of environmental, right of way and construction impacts using aerial photography and GIS mapping, and a qualitative assessment of traffic operations. Based on the tier analysis, a recommended interchange configuration was selected for each location.

#### I-85 at US 29-601

Based on the design sketch planning exercise, the following five interchange configurations were developed for this location:

- Diamond
- Partial Cloverleaf Type A (ParClo A)
- Partial Cloverleaf Type B (ParClo B)
- Single Point Urban Interchange (SPUI)
- Diverging Diamond Interchange (DDI)

The tier analysis results indicate the peak hour traffic demand along the I-85 mainline would flow similarly under any of these five interchange configurations. The peak hour intersection capacity analysis indicates that the DDI configuration has the best traffic operations. Under the DDI configuration, the ramp termini intersections along US 29-601 would operate at LOS C or better throughout the day.

The area around the US 29-601 interchange is heavily developed so impacts to the natural environment would be minor with the DDI configuration. Two unnamed tributaries to Threemile Branch are affected by improvements to the interchange. Right of way impacts are comparable among the five options considered. Based on traffic operations and the minor environmental impacts, the DDI is recommended at this location. (Figure 2)

### I-85 at Dale Earnhardt Boulevard

The following four interchange concepts were developed for this location:

- Improved Folded Diamond
- Half Cloverleaf
- Improved Diamond with Slip Ramp
- Improved Diamond with Relocated, Elongated Loop

The tier analysis results indicate that the peak hour traffic demand along the I-85 mainline would flow similarly under any of these interchange configurations. The Improved Diamond with Relocated, Elongated Loop offers the best traffic operations along the ramps and I-85. It involves modifying the ramp in the southeast quadrant, building a new loop and modifying the ramp configuration in the northeast quadrant, removing the existing loop and ramp in the northwest quadrant, and relocating the northwest ramp and loop to the existing Jaycee Road right-of-way. (Figure 3) The bridge on Dale Earnhardt Boulevard over I-85 could be retained with this option.

Additionally, Dale Earnhardt Boulevard will be widened from just north of Old Earnhardt Road to south of Vinehaven Drive to provide adequate turn lanes, based on traffic projections. Dale Earnhardt Boulevard will become a median-divided roadway with curb and gutter. Shoulder sections will be provided in the interchange area. Roxie Street will also be widened as part of these improvements to allow for turn lanes at Dale Earnhardt Boulevard. The old ramp in the northwest quadrant will be modified to serve as the main access for the Lowe's Home Improvement store.

Impacts to the natural environment are expected to be minor with any of the configurations because the area is mostly built out. Two unnamed tributaries and a small associated wetland may be affected by the reconstruction of the interchange. Residential impacts are greater in the northwest quadrant with this option and commercial impacts are greater with the other options.

### I-85 at Lane Street

Based on the design sketch planning exercise, the following four interchange concepts were developed for this location:

- Diamond
- Diamond with Loop in Northwest Quadrant
- Diamond with Roundabouts
- Diverging Diamond Interchange (DDI)

The tier analysis indicates that the peak hour traffic demand along I-85 would flow similarly with any of these four interchange configurations. The peak hour intersection capacity analysis indicated that the Diamond with Roundabouts concept would require the least number of lanes (four) across the I-85 overpass and would substantially improve traffic flow at the Lane Street interchange. (Figure 4) This configuration and the diamond with loops configuration would have relatively higher right of way impacts than the diamond or DDI. Natural resource impacts are comparable for all options. Based on the screening analysis, the diamond with roundabouts configuration is recommended at this location.

The recommended reconstruction of the Lane Street interchange includes reconstructing ramps in all four quadrants, providing roundabouts at the ramp terminals with Lane Street, providing allowance for a future loop in the northwest quadrant, replacing the existing three-lane bridge on Lane Street over I-85 with a four-lane, median-divided bridge, and widening Lane Street to accommodate a concrete median and turn lanes through the interchange area. As part of these improvements, the new bridge over I-85 will be constructed to the north of the existing bridge in order to maintain traffic during construction. Lane Street will have curb and gutter outside the interchange area and shoulders and ditches within the interchange area. Additional improvements include a roundabout at the intersection of Lane Street and Royce Street/Turkey Road and a service road connecting the hotel and Waffle House in the southeast quadrant to Royce Street.

#### I-85 at NC 152

Based on the design sketch planning exercise, the following three interchange concepts were developed for this location:

- Diamond
- Diamond with Loop in Northeast Quadrant
- Diamond with Roundabouts

The tier analysis results indicate that the peak hour traffic demand along the I-85 mainline would flow similarly under either of these three interchange configurations. The peak hour intersection capacity analysis shows that the diamond with roundabouts configuration operates best. (Figure 5) The peak hour traffic demand along the I-85 mainline would flow similarly under any of these three interchange configurations. The ramp termini intersections along NC 152 would operate at LOS C or better throughout the day.

Reconstruction of the interchange would involve roundabout at the ramp terminals and new ramps in each of the four quadrants. The existing NC 152 bridge over I-85 will be retained. NC 152 will be widened to accommodate a concrete median and turn lanes. It will remain a shoulder and ditch section.

The tier analysis indicated comparable impacts for the diamond with loop and diamond with roundabout. The diamond with roundabouts configuration is recommended at this location.

#### US 29-601 Connector at NC 152

Currently, at the US 29-601 Connector, a cloverleaf interchange provides access to and from NC 152. TIP Project I-3610 proposes to reconstruct this interchange as a half-diamond interchange with ramps in the southeast and southwest quadrants and traffic signals at both ramp termini intersections. To accommodate projected traffic, NC 152 is proposed to be widened between its interchange with I-85 to the vicinity of Hitachi Metals Drive.

With the half-diamond configuration, traffic coming from I-85 southbound and heading to I-85 northbound would be re-routed to the I-85/NC 152 interchange. Improvements proposed at this interchange would accommodate this additional traffic. Reconstruction includes removing all three loops and both ramps. A five-lane bridge with a concrete median is proposed over US 29, west of the existing bridge. Yost Hill Road is proposed to be realigned to intersect with NC 152 across from the US 29 eastbound exit ramp. Madison Road will be realigned to intersect with NC 152 across from the US 29 westbound entrance ramp. (Figure 6)

With the half-diamond configuration, the ramp termini intersections at the US 29-601 Connector/NC 152 interchange would operate at LOS C or better throughout the day. Right of way and environmental impacts would be minor. Natural resources affected include tributaries to Town Creek, along with impacts to wetlands associated with these tributaries. A half diamond configuration is recommended for this location.

With the proposed improvements in place, level of service on the mainline is improved, bridges and interchanges will meet design standards, and lane continuity is provided between the eight-lane sections north and south of the proposed project. The Improve Existing Facility Alternative (shown in Figure 6) will meet the purpose and need of the proposed project.

#### **Cultural Resources**

A field survey of the Area of Potential Effects (APE) was conducted in 2005. All structures within the APE were evaluated for National Register eligibility, and it was determined that there were two National Register- eligible properties within the APE: the Blake House and Goodman Farm. The North Carolina State Historic Preservation Office (HPO) concurred with the findings in a memorandum dated March 9, 2006. An additional survey conducted in December 2010 determined that no additional properties were eligible for the National Register. In a meeting between NCDOT, FHWA, and HPO on

July 26, 2011, it was determined that the proposed project would have no effect on either the Blake House or Goodman Farm.

The State Historic Preservation Office (HPO), in a memorandum dated May 9, 2012, commented that based on their knowledge of the area, it is unlikely that any archaeological resources that may be eligible for the National Register of Historic Places will be affected by the proposed project. HPO recommended no archaeological investigation be conducted for the project.

**Endangered Species**

As of September 22, 2010, the U.S. Fish and Wildlife Service (USFWS) lists two federally protected species for Cabarrus and Rowan Counties (Table 3).

**Table 3. Federally Protected Species Listed for Cabarrus and Rowan Counties**

Scientific Name	Common Name	County	Federal Status	Habitat Present	Biological Conclusion
<i>Helianthus</i>	Schweinitz's sunflower	Cabarrus Rowan	E	Yes	No Effect
<i>Lasmigona decorata</i>	Carolina heelsplitter*	Cabarrus	E	Yes	No Effect

E - Endangered

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

**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.



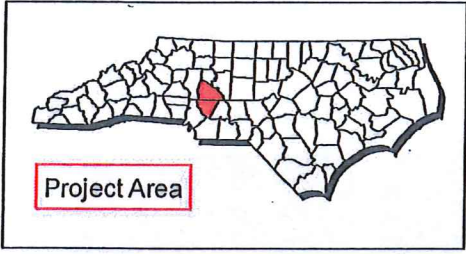
## **Compensatory Mitigation**

The purpose of compensatory mitigation is to replace the lost functions from a project's impacts to Waters of the United States, including wetlands. Appropriate and practicable compensatory mitigation will be required for unavoidable impacts from this proposal. The applicant will make every effort to provide on-site mitigation where possible. Any mitigation requirements not provided on-site will be met off-site through utilization of the North Carolina Ecosystem Enhancement Program.

## **Commenting Information**

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidate 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 least environmentally damaging practicable alternative (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 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.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, April 12, 2013. Comments should be submitted to Mr. John Thomas, US Army Corps of Engineers, Raleigh Regulatory Field Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587, telephone 919-554-4884 x25.



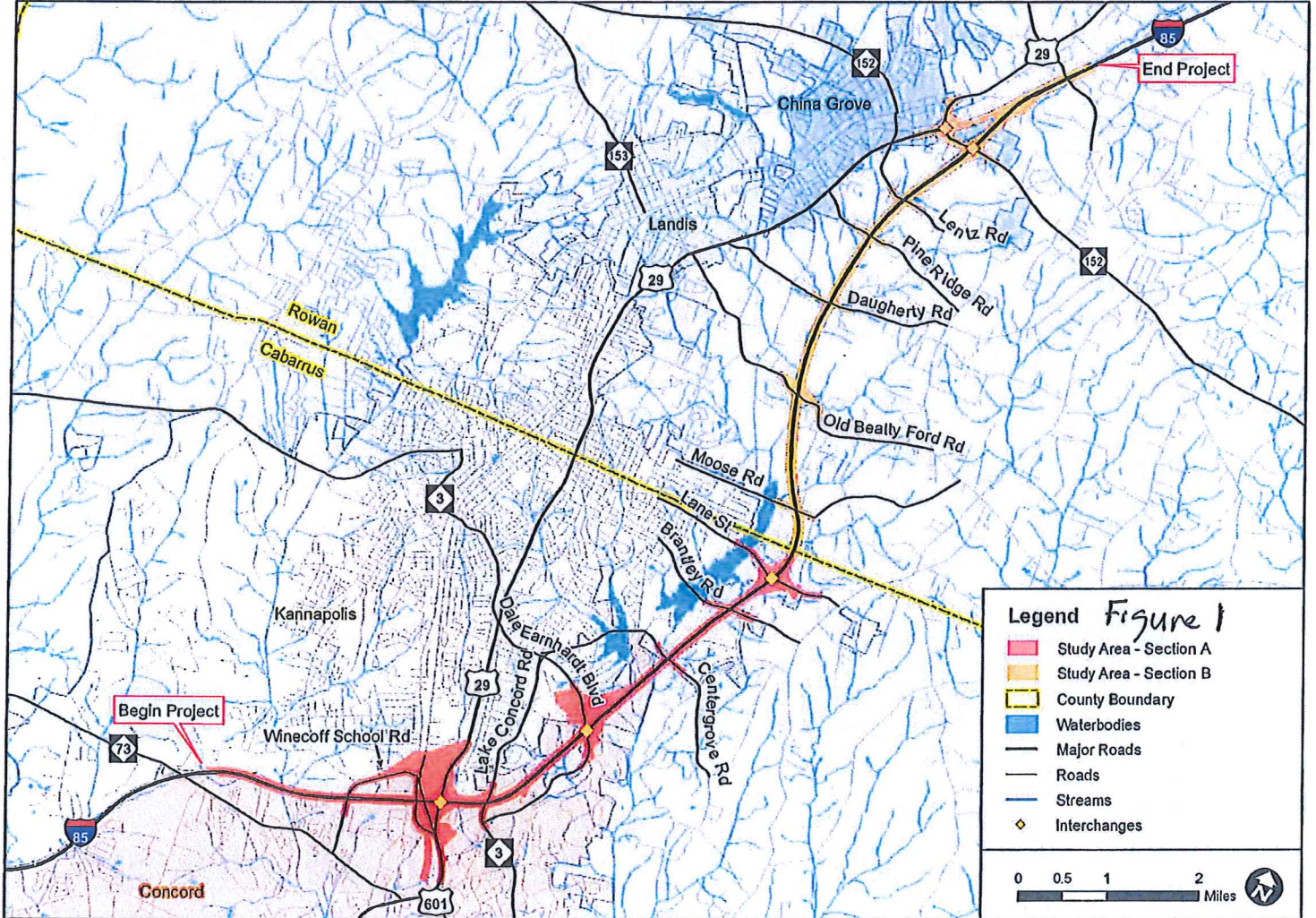
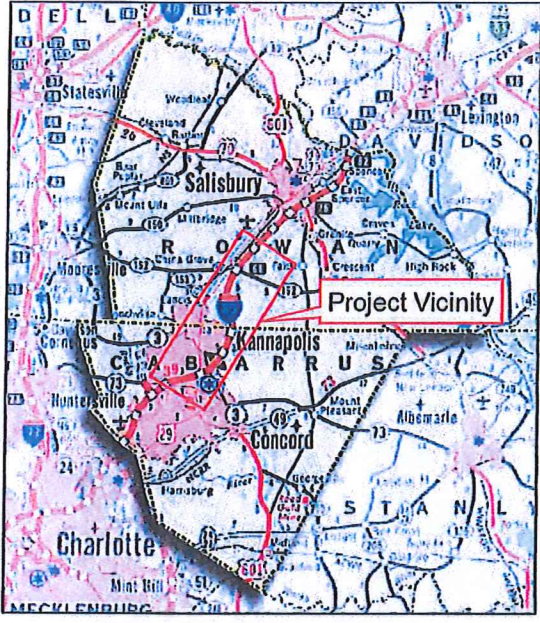
## Project Vicinity

I-85 Widening and Interchange Improvements From North of NC 73 to US 29-601 Connector (I-3802/I-3610/B-5365)

Rowan and Cabarrus Counties, North Carolina



North Carolina  
Department of Transportation











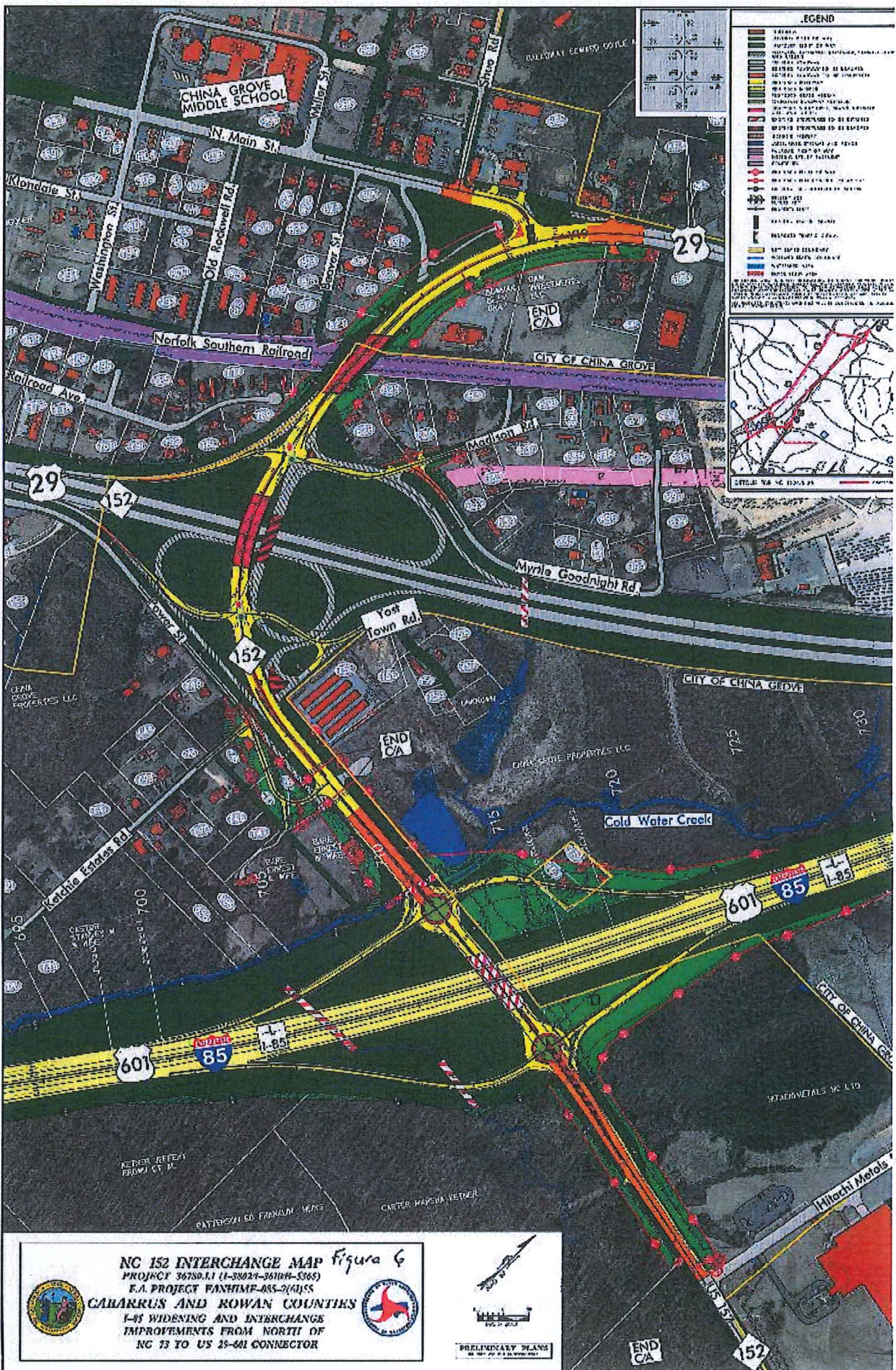












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**NC 152 INTERCHANGE MAP** *Figure 6*  
 PROJECT 36750.1.1 (1-38024-36104-S365)  
 E.A. PROJECT VANHIMP-055-2(4)SS  
**CALARRUS AND ROWAN COUNTIES**  
 I-85 WIDENING AND INTERCHANGE  
 IMPROVEMENTS FROM NORTH OF  
 NC 15 TO US 29-601 CONNECTOR

PRELIMINARY PLAN  
 1" = 100'