

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

August 10, 2012

MEMORANDUM

TO: Calvin W. Leggett, P.E.
Manager, Program Development Branch

FROM: F. Rasay Abadilla, Jr., P.E.
Feasibility Studies Engineer
Feasibility Studies Unit

SUBJECT: **R-2580A** – Proposed widening of US-158 between US-220 in Guilford County and US-29 Business in Reidsville, Rockingham County.

As requested, we have completed the feasibility study for R-2580A, widening of US-158 from US-220 in Guilford County to US-29 Business in Reidsville, Rockingham County. This project proposes to widen US-158 from two to four lanes for the limits mentioned above, a distance of approximately 15.3 miles. The project location is shown on Figure 1.

Our evaluation of this project was based on a four-lane divided shoulder section, 102 feet from edge of pavement to edge of pavement with 12-foot travel lanes, a 46-foot depressed grass median, and 8-foot shoulders (4 feet of which is paved) on 250 feet of right of way.

US-158 contains a 2-lane bridge that crosses Lake Reidsville as well as potential interchanges at three locations within the project corridor that should be considered during the design phase. Included in the total cost below is the construction of a 2-lane bridge parallel to the aforementioned structure that will carry US-158 EB traffic plus the construction of three prospective interchanges at SR 2351 (Witty Rd), SR 1001 (Woolen Store Rd), and SR 2422 / SR 2426 (Monroeton Rd/Cunningham Mill Rd).

The estimated total cost of this project is as follows:

Construction	\$ 101,600,000
Right of Way	\$ 80,000,000
Utility Relocation	\$ 7,300,000
Total Cost.....	\$ 188,900,000

The 2008 year Average Daily Traffic (ADT) along US-158 ranges from 4,100 vehicles per day (vpd) to 11,000 vpd. For the design year 2035, the traffic volume along US-158 is estimated to range between 7,200 vpd to 21,200 vpd. Truck traffic is estimated to make up approximately 6 percent of the daily traffic.

The existing segment of US-158 operates at a level of service (LOS) D under current traffic volumes. If no improvements are made in the 2035 design year, it is projected that the segment along US-158 will operate at a LOS E. With the proposed improvements, US-158 is projected to operate at a LOS B or better.

Between 2005 and 2008, 275 total crashes were reported within the project limits. The crash rate for US-158 is 136.07 crashes per 100 million vehicle miles (crashes/100MVM) traveled. This rate is lower than the statewide rate of 159.45 crashes / 100MVM for two-lane undivided United States routes. There were 94 non-fatal injury crashes, 177 property damage only crashes, and 4 fatal crashes. The most prevalent types of crashes were Rear End (29.46%), Animal (22.91%), Angle (12.00%), and Fixed Object (8.36%).

A detailed investigation was not conducted for this feasibility study; however, existing information available for this project area has been screened for environmental and historic concerns. It is anticipated that there will be possible impacts to the following:

- Two graveyards along south side of US-158 near SR 2343 and SR 2399
- Evergreen Memory Gardens Cemetery
- Lake Reidsville

Maps at the Survey and Planning Branch of the North Carolina State Historic Preservation Office were used to determine if any historic properties on the National Register of Historic Places (NRHP) or state study lists exist within the proposed project study area. The following properties located within the proposed project study area were found to be potentially historic properties: William Haynes Farm, Witty Farm, Winchester House, Roach House, Midway United Methodist Church, Griffin House, Carter House, and C. Smith Farm.

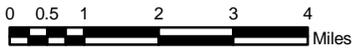
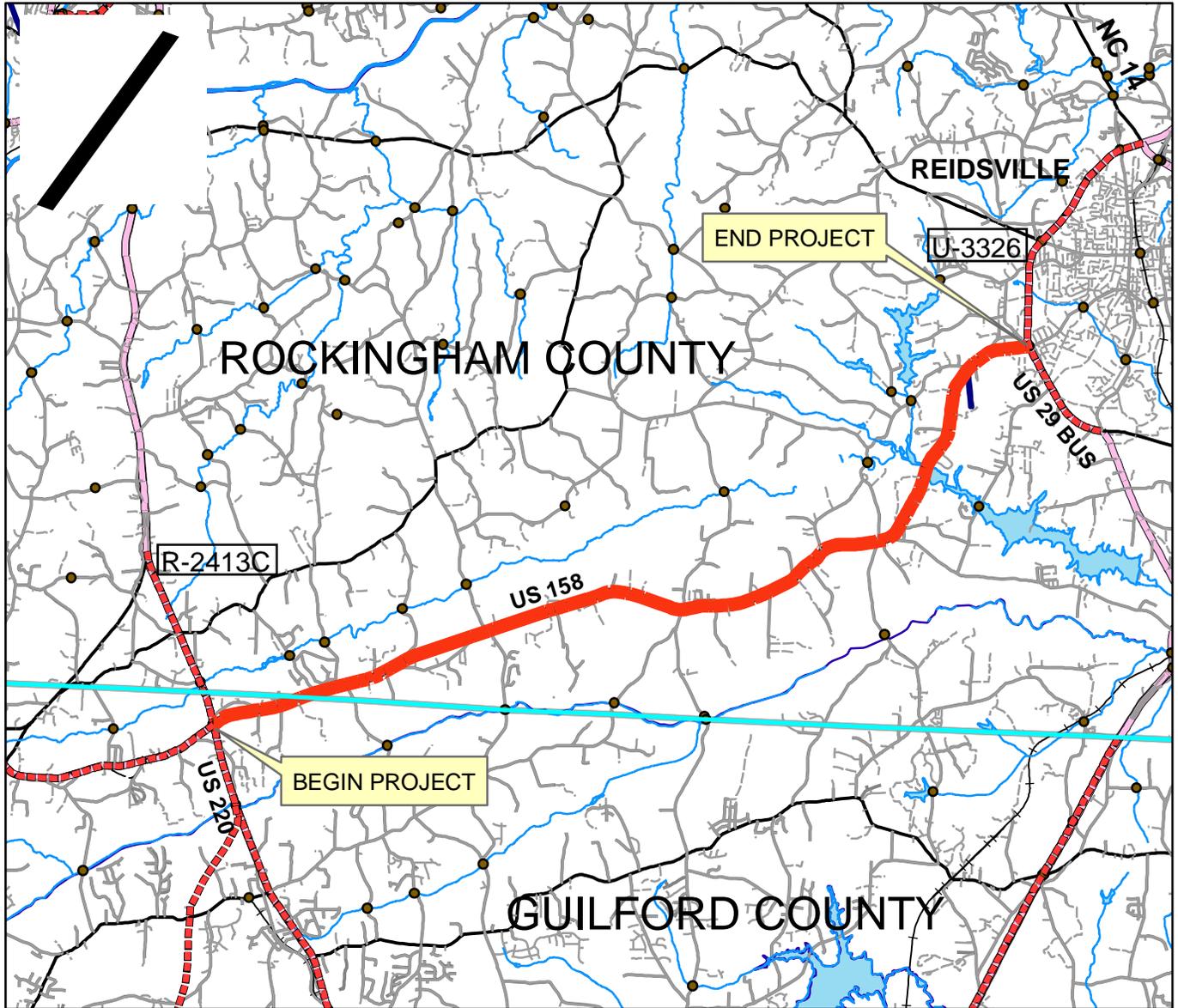
No impacts to parks, recreation areas, or community facilities are anticipated with this project. There is no indication of threatened or endangered species in the area based on available GIS data maintained by the National Heritage Program.

The proposed project study area is located in the Cape Fear River Basins. US-158 crosses Troublesome Creek (Lake Reidsville) in the project corridor. Troublesome Creek (Lake Reidsville) has a stream classification of WS-III NSW CA. This stream will likely need to be surveyed and have the appropriate coordination with the North Carolina Department of Environment and Natural Resources (NCDENR) and the U.S. Army Corps of Engineers (USACE) during any environmental document study. A portion of the project study area is located in a WS-III Water Supply Watershed.

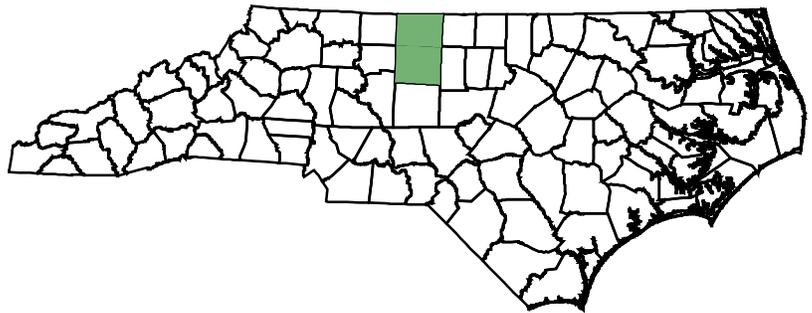
As you are aware, this work is preliminary and not the product of comprehensive environmental or design evaluations. If you should have further questions or additional information is needed, please do not hesitate to contact me at 919-707-4660, or via e-mail at rabadilla@ncdot.gov.

Attachment: Project Location Map

cc: Mike Stanley, P.E., Manager – TIP Central Region
Mike Mills, P.E., Division 7 Engineer



 PROJECT LIMITS



LEGEND

-  NCDOTBridgeLocations
-  Water Bodies
-  Major Water Bodies
-  Rivers
-  Secondary Roads
-  Airports
-  Major Rivers
-  dotrailrd
- Roads**
-  I
-  NC
-  SR
-  US
-  R-2580A

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROGRAM DEVELOPMENT**

R-2580A

**PROPOSED WIDENING OF US 158
FROM US 220 IN GUILFORD COUNTY TO US 29 BUS IN REIDSVILLE
GUILFORD & ROCKINGHAM COUNTIES**

DIVISION 7 **FIGURE 1**