



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

DIVISION OF HIGHWAYS
P.O. BOX 25201, RALEIGH, N.C. 27611-5201

GARLAND B. GARRETT JR.
SECRETARY

March 8, 1996

MEMORANDUM TO: Mr. Clark Jenkins, Member, Board of Transportation
Mr. D. R. Dupree, Division Engineer, Division 4
Mr. C. W. Leggett, P.E.
Mr. W. H. Webb, P.E.
Mr. J. M. Lynch, P.E. (6) Attention: Roberto Canales, P.E.
Congestion Management Engineer
Mr. J. B. Williamson
Mr. H. F. Vick, P.E. (2)
Mr. D. R. Morton, P.E.
Mr. G. T. Shearin, P.E.
Mr. M. R. Poole, P.E.
Mr. A. L. Avant (2)
Mr. J. D. Lane
Mr. T. A. Peoples, P.E.
Mr. L. K. Barger, P.E.

FROM: David G. Modlin, Ph.D., P.E.
Head of Feasibility Studies

SUBJECT: Feasibility Study # U-3471, Wilson, SR 1606 (Black Creek Road) from the Proposed US 264 Bypass to US 301 (Ward Boulevard), Wilson County.

Our staff has completed a feasibility study for the subject proposed project. This brief analysis suggests improvements that would be logical if the project were to be funded. A copy of our report is attached for your information.

DGM/joa

Attachment

cc: Dr. L. R. Goode, P.E.
Mr. B. G. Jenkins, P.E.
Mr. Eric J. Lamb

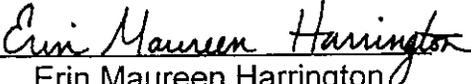


FEASIBILITY STUDY

Wilson
SR 1606 (Black Creek Rd.)
from the Proposed US 264 Bypass to US 301 (Ward Blvd.)
Wilson County
U-3471



Prepared by
Program Development Branch
Division of Highways
N. C. Department of Transportation


Erin Maureen Harrington
Engineering Co-op


Eric J. Lamb
Feasibility Studies Engineer


David G. Modlin, Jr., Ph.D., P.E.
Head of Feasibility Studies

2/27/96
Date

Wilson
SR 1606 (Black Creek Rd.)
from the proposed US 264 Bypass to US 301 (Ward Blvd.)
Wilson County
U-3471

I. General Description

This feasibility study describes the proposed widening of SR 1606 (Black Creek Rd.) from the proposed US 264 Bypass to US 301 (Ward Blvd.) in Wilson, a distance of 2.3 miles (3.7 km). The project location is shown on Figure 1. The recommended cross section is a five-lane, 64-foot (19.5-m) curb and gutter section with 8-foot (2.4-m) berms on 100 feet (30.5 m) of right-of-way. It is recommended to widen asymmetrically to the west side of the roadway from 450 feet (137.2 m) north of SR 1607 (Charleston St.) to US 301. It is also recommended to replace the existing bridge over Hominy Swamp with a new bridge with a clear deck width of 64 feet (19.5 m).

It is anticipated that there will be 7 residences and 3 businesses relocated due to this project. The total cost of the project, including construction and right-of-way, is estimated to be \$9,100,000.

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

II. Need for Project

The purpose of this project is to accommodate a projected increase in traffic due to development in the area and the construction of the proposed US 264 Bypass. This project is supported by the City of Wilson, the Wilson County Commissioners, and the Wilson County Chamber of Commerce.

SR 1606 is designated as a major thoroughfare in the Wilson Thoroughfare Plan and as a minor urban arterial in the North Carolina Statewide Functional Classification System.

Development varies throughout the project limits. South of SR 1692 (Commerce Rd.), development is mostly agricultural. From SR 1692 to Cargill Avenue, the project is a mix of agricultural, residential and commercial

development. There are several large industries and warehouses in this area, and there is currently a proposal to construct a \$40 million waste handling facility along SR 1606. North of Cargill Avenue, development is primarily residential and concentrated on the eastern side of the roadway.

SR 1606 is currently a two-lane roadway 24 feet (7.3 m) wide with soil shoulders 8 feet (2.4 m) wide. The existing right-of-way varies between 60-80 feet (18.3-24.4 m).

There is an existing structure carrying SR 1606 over Hominy Swamp. Bridge No. 8 is located 600 feet (183 m) south of SR 1607 (Charleston St.). Built in 1979, this bridge is 120 feet (36.6 m) long and has a clear deck width of 35.8 feet (10.9 m). This bridge currently has a sufficiency rating of 87.5.

Carolina and Northwestern Railroad crosses SR 1606 north of Cargill Avenue. Currently there are approximately 8 trains per day crossing at an average speed of 25 mph. The crossing is currently marked by flashers with no barriers. There is one track at this location, and the exposure index is estimated to be approximately 74,000.

There is an existing signal at the intersection with US 301.

The proposed US 264 Bypass (R-1023 B) will be a four-lane divided facility on new location that will intersect SR 1606 at an interchange located approximately 0.5 (0.8 km) miles south of SR 1692 (Commerce Rd.). It is scheduled for right-of-way acquisition in 1997 and construction in 1999.

There are two areas of wetlands within the project limits. There are wetlands located adjacent to both sides of the bridge at Hominy Swamp. The second area of wetlands is located south of SR 1692 (Commerce Rd.) on the west side of the roadway. The proposed improvements may have some impact on these areas.

The 1995 Average Daily Traffic (ADT) along SR 1606 varies between 2,900 and 10,000 vehicles per day (vpd), with the highest volumes in the vicinity of US 301. For the design year 2015, the estimated traffic volume on SR 1606 is projected to be between 5,000 and 15,000 vpd. Construction of the US 264 Bypass will alter the design year traffic volume on SR 1606 to between 9,000 and 14,000 vpd. Truck traffic is estimated to make up 7% of daily traffic on SR 1606.

Currently SR 1606 is operating at Level of Service (LOS) D. If no improvements are made and the proposed US 264 Bypass is constructed, SR 1606 will operate at LOS E in the design year 2015. If SR 1606 is widened

to a five-lane curb and gutter section, the facility will operate at LOS A in the current year and LOS B in the design year.

During the three-year period from April 1992 to March 1995, there were 65 accidents on SR 1606 within the project limits. Thirty-six injuries were reported as a result of these accidents, including two fatalities. The accident rate along SR 1606 is 626.81 accidents per million vehicle miles (acc/100mvm). This compares with the 1995 statewide rate of 340.5 acc/100mvm for North Carolina urban secondary roads. Thirty-seven percent of the accidents within the project limits occurred at the intersection with US 301. Twenty-five percent of the accidents along the project were rear-end collisions. Forty percent of the traffic accidents along SR 1606 occurred at night. A five-lane curb and gutter section should reduce the rear-end accidents and improve safety conditions along SR 1606.

III. Recommendations

It is recommended to widen SR 1606 (Black Creek Rd.) from the proposed US 264 Bypass to US 301 (Ward Blvd.) in Wilson, a distance of 2.3 miles (3.7 km). The project location is shown on Figure 1. The recommended cross section is a five-lane, 64-foot (19.5-m) curb and gutter section with 8-foot (2.4-m) berms on 100 feet (30.5 m) of right-of-way.

It is recommended to widen asymmetrically to the west side of the roadway from 450 feet (137.2 m) north of SR 1607 (Charleston St.) to US 301. It is also recommended to replace the existing bridge over Hominy Swamp with a new bridge with a clear deck width of 64 feet (19.5 m).

It is recommended to upgrade the existing signal at US 301 (Ward Blvd.)

It is anticipated that there will be 7 residences and 3 businesses relocated due to this project.

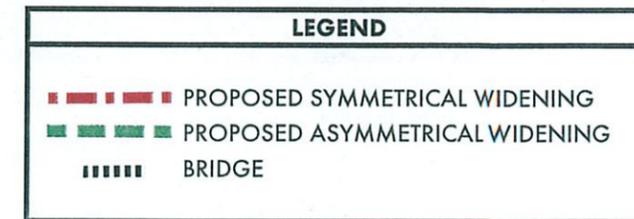
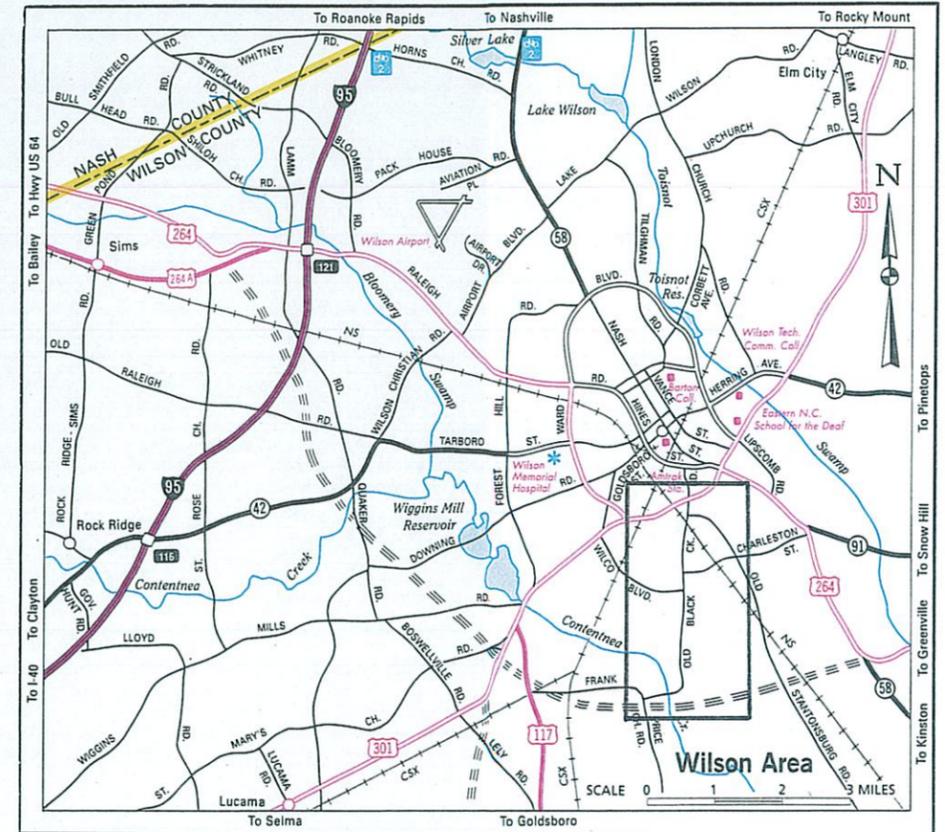
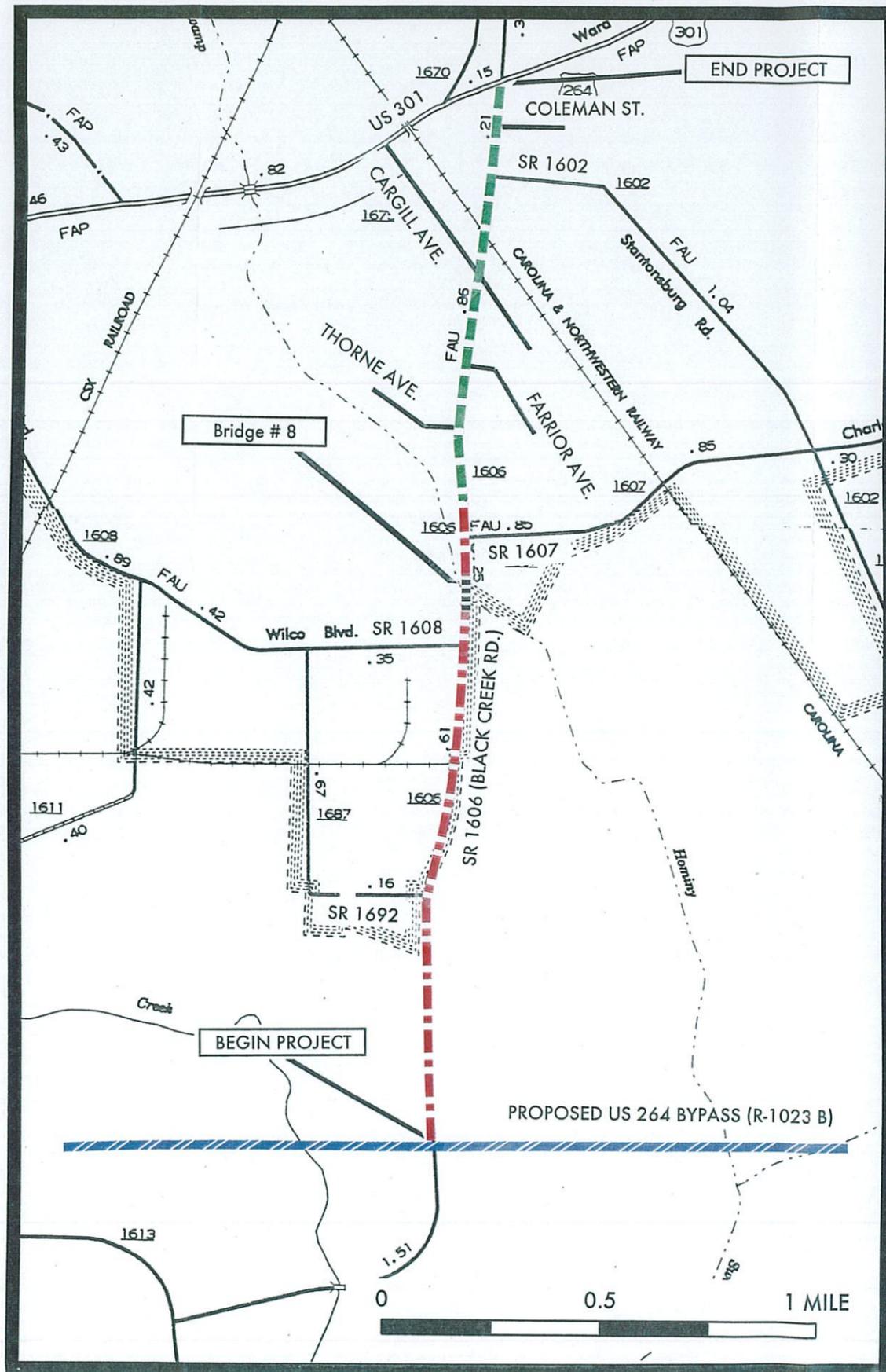
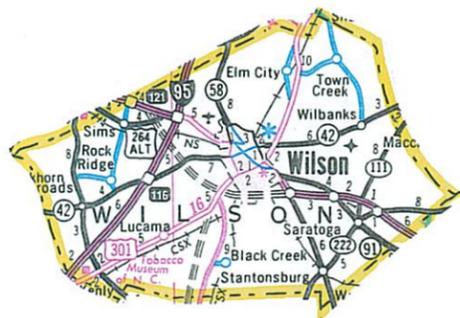
The total cost of the recommended improvements is as follows:

Construction.....	\$ 6,200,000
Right-of-way.....	\$ 2,900,000
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Total Cost	\$ 9,100,000

IV. Other Comments

An environmental screening was not conducted for this study. However, no historic properties or threatened and endangered species conflicts are anticipated. Impact to wetlands are expected and a Corps of Engineers Section 404 Permit is anticipated.

No special accommodation for bicycles is recommended on this project.



FEASIBILITY STUDIES UNIT

U-3471
SR 1606 (BLACK CREEK RD.)
FROM THE PROPOSED US 264 BYPASS
TO US 301 (WARD BLVD.)
WILSON

DIVISION 4	WILSON COUNTY	FIGURE 1
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