



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

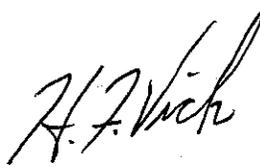
MICHAEL F. EASLEY
GOVERNOR

1534 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1534

W. LYNDO TIPPETT
SECRETARY

March 2, 2001

MEMORANDUM TO: Mr. Clark S. Jenkins, Member, Board of Transportation
Mr. Jim Trogdon, P.E., Division Engineer, Division 4
Mr. David D. King
Mr. C. W. Leggett, P.E.
Mr. J. M. Lynch, P.E. (3) Attention: Jim Dunlop, P.E.
Mr. J. B. Williamson
Mr. Bill Gilmore, P.E. (2)
Ms. D. M. Barbour, P.E.
Mr. J. E. Alford, P.E.
Mr. Blake Norwood, P.E.
Mr. A. L. Avant
Mr. J. M. McIntyre, P.E.
Mr. J. D. Lane
Mr. T. A. Peoples, P.E.
Mr. H. A. Tasaico, P.E.

FROM: Mr. H. Franklin Vick, P.E. 
Feasibility Studies Unit Head

SUBJECT: Feasibility Study # FS-9904C, NC 111 (Wilson Street) from
NC 122 (McNair Road) to US 64 Alternate (Western Boulevard),
Tarboro, Edgecombe 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.

HFV/dl

Attachment

cc: Mr. R. L. Hill, P.E.
Mr. L. A. Sanderson, P.E.

FEASIBILITY STUDY

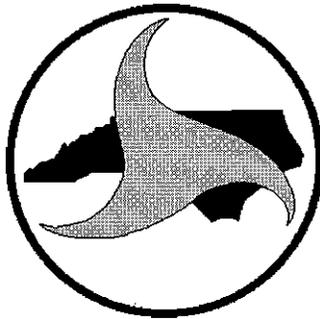
Tarboro

**NC 111 (Wilson Street)
From NC 122 (McNair Road)
To US 64 Alternate (Western Boulevard)**

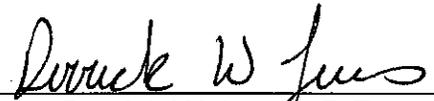
Edgecombe County

Division 4

FS-9904C



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


Derrick W. Lewis, P.E.
Feasibility Studies Engineer


H. Franklin Vick, P.E.
Feasibility Studies Unit Head


Date

Tarboro

NC 111 (Wilson Street)
From NC 122 (McNair Road)
To US 64 Alternate (Western Boulevard)
Edgecombe County

FS-9904C

I. General Description

This feasibility study describes the widening of NC 111 (Wilson Street) from NC 122 (McNair Road) to US 64 Alternate (Western Boulevard), a distance of 2.4 miles (3.8 km). The project location is shown on Figure 1. The original feasibility study request for this project asked for a three-lane section. However, our analysis indicated that the three-lane section between Simpson Drive and US 64 Alternate will only function at a "D" level of service through the year 2015, while the remainder of the project is anticipated to function acceptably through the 2025 design year. Therefore, we evaluated the following two alternatives in this feasibility study.

Alternative	Cost
1. Widen NC 111 to a three-lane curb and gutter section, 40 feet (12.2 m) wide face to face of curbs, from NC 122 to US 64 Alternate.	\$ 8,500,000
2. Widen NC 111 to a three-lane curb and gutter section, 40 feet (12.2 m) wide face to face of curbs, from NC 122 to the US 64 Bypass. Then widen NC 111 to a five-lane curb and gutter section, 64 feet (19.5 m) wide face to face of curbs, from the US 64 Bypass to US 64 Alternate.	\$ 9,900,000

Regardless of the alternative, the recommended right of way width is a symmetrical 100 feet (30.5 m). Under both alternatives, we anticipate that there will be five residences and one business relocated as a result of this project. It should also be noted that both alternatives may impact up to 30 graves at a graveyard in the southwest quadrant of the NC 111 / US 64 Alternate intersection.

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 increase the traffic carrying capacity and safety of NC 111 (Wilson Street) in Tarboro. The Town of Tarboro supports this project.

NC 111 (Wilson Street) is designated as a major thoroughfare in the Tarboro Princeville Thoroughfare Plan and as a major collector in the North Carolina Statewide Functional Classification System.

Existing NC 111 (Wilson Street) is mostly a two-lane, 28-foot (8.5-m) wide, shoulder section for the majority of the project. NC 111 north of the US 64 Bypass is mostly residential development with some commercial development at the US 64 Alternate intersection. A great deal of the property along NC 111 south of the US 64 Bypass is undeveloped except for the NCDOT Maintenance Yard, Edgecombe Community College, and a US Forest Service Facility.

Bridge No. 152 carries NC 111 over US 64 Bypass. This bridge is 236 feet (72 m) long and has a deck width of 32.8 feet (10 m). Built in 1986, this bridge currently has a sufficiency rating of 75.9.

The current year Average Daily Traffic (ADT) along NC 111 (Wilson Street) is estimated to be between 6,800 to 8,300 vehicles per day (vpd). For the design year 2025, the estimated traffic volumes will range between 13,600 and 16,100 vpd. Truck traffic is estimated to make up seven percent of daily traffic.

During the three-year period from October 1995 through September 1998, there were 48 accidents reported on NC 111 within the project limits. These accidents resulted in 26 injuries with no fatalities. The accident rate along NC 111 within the project limits is 272 accidents per 100 million vehicle miles (acc/100mvm). This compares with the 1996 to 1998 statewide rate of 229 acc/100mvm for rural North Carolina 2-lane roadway.

III. Discussion of Recommendations

This feasibility study describes the widening of NC 111 (Wilson Street) between NC 122 (McNair Road) to US 64 Alternate (Western Boulevard) (See Figure 1). The original feasibility study request for this project asked for a three-lane section, but our analysis indicates that a five-lane section will be needed on NC 111 from Simpson Drive to US 64 Alternate to accommodate the 2025 traffic volumes. Therefore, we evaluated both a three-lane curb and gutter section (Alternative 1) and a combination of a five-lane and three-lane curb and gutter sections (Alternative 2).

Regardless of the alternative, the recommended right of way width for this project is a symmetrical 100 feet (30.5 m). Under both alternatives, we anticipated that five residences and one business relocated as a result of this project. In addition, both alternatives may impact up to 30 graves in a graveyard in the southwest quadrant of the NC 111 / US 64 Alternate intersection.

Alternative 1

Alternative 1 proposes to widen NC 111 from NC 122 to US 64 Alternate. The proposed cross section is a three-lane curb and gutter section, 40 feet (12.2 m) wide face to face of curbs, with 10-foot (3.0-m) berms. In addition to the three lane widening of NC 111, this alternative also includes an exclusive right turn lane on both NC 111 (Wilson Street) approaches as well as the southbound US 64 Alternate (Western Boulevard) approach at the NC 111 / US 64 Alternate intersection. In addition, an exclusive right turn lane should also be provided on the westbound NC 111 approach to the SR 1208 (Barlow Road) intersection. At the US 64 Bypass, NC 111 will transition back to the existing two-lane section in order to retain the existing bridge over US 64 Bypass. The total cost of the project, including construction and right-of-way, is estimated to be \$8,500,000.

Construction.....	\$ 3,800,000
Right-of-way.....	\$ 4,700,000
Total Cost	\$ 8,500,000

Alternative 2 (Recommended)

Alternative 2 proposes to widen NC 111 from NC 122 to US 64 Alternate utilizing a combination of five-lane and three-lane sections. From NC 122 to the US 64 Bypass, a three-lane curb and gutter section, 40 feet (12.2 m) wide face to face of curbs with 10-foot (3.0-m) berms will be utilized. Then NC 111 will be widened to a five-lane curb and gutter section, 64 feet (19.5 m) wide face to face of curbs, with 10-foot (3.0 m) berms. The existing structure over the US 64 Bypass will be retained under this alternate. In addition to the widening of NC 111, this alternative also includes an exclusive right turn lane on the southbound US 64 Alternate approach at the intersection with NC 111. The total cost of the project, including construction and right-of-way, is estimated to be \$9,900,000.

Construction.....	\$ 5,200,000
Right-of-way.....	\$ 4,700,000
Total Cost	\$ 9,900,000

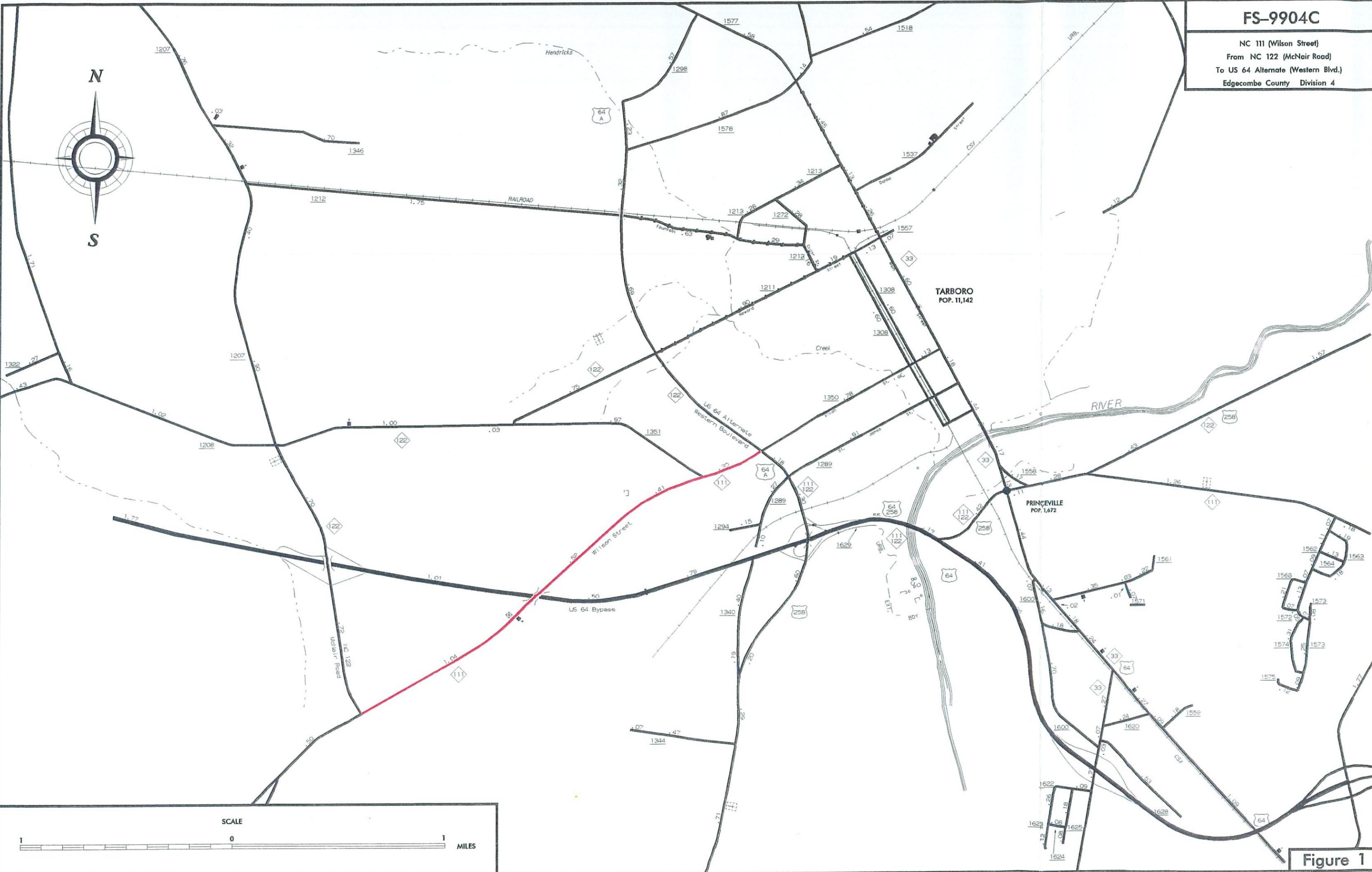
IV. Additional Comments

An environmental screening was not conducted for this study. There are no properties on the National Register of Historic Places along the project. We also do not anticipate any significant impacts on wetlands in the project area. In addition, no special accommodation for bicycles is recommended on this project.

A transportation benefit analysis was also completed for this project. For the period between the current year and the 2025 design year, it is estimated that the total transportation benefits for the project are \$4,100,000, which is an average of \$170,833 per year. The total benefits include accident cost savings, time cost savings, and operating cost savings.

FS-9904C

NC 111 (Wilson Street)
From NC 122 (McNair Road)
To US 64 Alternate (Western Blvd.)
Edgecombe County Division 4



SCALE



Figure 1