



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 17, 1997

MEMORANDUM TO: Mr. Henson Barnes, 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

A handwritten signature in cursive script that reads "David Modlin".

SUBJECT:

Feasibility Study # U-3611, Goldsboro, SR 1003 (New Hope Road) from SR 1556 (Wayne Memorial Drive) to SR 1709 (Miller's Chapel Road), Wayne 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. William J. Watson, P.E.



Feasibility Study

Goldsboro

SR 1003 (New Hope Road)  
From SR 1556 (Wayne Memorial Drive)  
To SR 1709 (Miller's Chapel Road)  
Wayne County

Division 4

U-3611

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



William J. Watson, P.E.  
Highway Planning Engineer



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

2/21/97  
Date

Goldsboro  
SR 1003 (New Hope Road)  
From SR 1556 (Wayne Memorial Drive)  
To SR 1709 (Miller's Chapel Road)  
Wayne County

I. GENERAL DESCRIPTION

This preliminary study describes the proposed widening of SR 1003 (New Hope Road) from SR 1556 (Wayne Memorial Drive) to SR 1709 (Miller's Chapel Road) in Goldsboro, Wayne County. The total project length is approximately 2.8 miles (4.5 km). The project location is shown on Figure 1. From the western project terminus to a point approximately 0.2 mile (0.3 km) west of SR 1567, the proposed cross-section is a 5-lane shoulder section, with paved shoulders 4 feet (1.2 m) wide, on a proposed right-of-way width of 120 feet (36.6 m). For the remainder of the project, the proposed cross-section is a 5-lane curb-and-gutter section, 68 feet (20.7 m) wide from face-to-face of curbs, with 10-foot (3.0-m) berms, on a proposed right-of-way width of 100 feet (30.5 m). These proposed cross-sections will accommodate anticipated bicycle traffic. The Office of Bicycle and Pedestrian Transportation and the City of Goldsboro have recommended bicycle accommodations on this project. Although Goldsboro does not have an adopted bicycle plan, there is an elementary school, a junior high school, a high school, and a junior college within the project corridor. The project will follow the existing alignment of SR 1003, except for approximately 0.5 miles (0.8 km) which will be built on new location, as shown on Figure 1, in order to improve the horizontal alignment. A 300-foot (91-m) extension of SR 1565 will be required as shown on Figure 1.

This project will likely require no business relocations and one residential relocation. The total cost including construction and right-of-way is estimated to be \$10,600,000.

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 needs, recommend a treatment including costs, and identify potential problem areas that 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 SR 1003 in Goldsboro. The project was requested by the City of Goldsboro and the Wayne County Board of Commissioners. This project is in an area which is experiencing rapid growth.

SR 1003 is classified as a Minor Arterial in the North Carolina Statewide Functional Classification System, and is a Major Thoroughfare on the Goldsboro Thoroughfare Plan. Land use along the western half of the project corridor is mainly farming and low density residential, while the eastern half of the corridor is characterized by higher density, suburban, single and multi-family residential properties. There is an elementary school, a junior high school, high school, and community college within the project corridor. There is some commercial development at the US 13 intersection, and at the SR 1709 intersection.

Existing SR 1003 is a 2-lane paved shoulder section with a pavement approximately 24 feet (7.3 m) wide, except that at the US 13 intersection both approaches have been widened to provide an exclusive left-turn lane. The SR 1556 intersection and the US 13 intersection are controlled with traffic signals. The existing right-of-way width appears to be 60 feet (18.3 m).

Traffic volume estimates for SR 1003 for the years 1996 and 2020 are 7,200 vehicles per day (vpd) and 14,500 vpd respectively. The Level of Service (LOS) without the proposed improvements is estimated to be LOS C (very close to D) in 1996 and Level E in 2020. With the proposed improvements the LOS is estimated to be Level A in 1996 and Level B in 2020.

During the three year period beginning March 1, 1993, and ending February 29, 1996, there were 98 accidents reported on SR 1003 within the project limits. This resulted in a total accident rate of 499 accidents per 100 million vehicle miles (ACC/100MVM). This compares with the statewide average of 348 ACC/100MVM for all urban Secondary routes in North Carolina for 1994.

There was 1 fatal accident reported, and 46 accidents resulted in 83 persons sustaining non-fatal injuries. The most prevalent type accidents were Rearend (32.6 %), Left-turn (27.5 %), and Ran-off-road (17.4 %). The proposed wider cross-section with a center turn lane will reduce the potential for these types of accidents.

### III. RECOMMENDATIONS

It is proposed to widen SR 1003 (New Hope Road) from SR 1556 (Wayne Memorial Drive) to SR 1709 (Miller's Chapel Road) in Goldsboro, Wayne County. The total project length is approximately 2.8 miles (4.5 km). The project location is shown on Figure 1. From the western project terminus to a point approximately 0.2 mile (0.3 km) west of SR 1567, the proposed cross-section is a 5-lane shoulder section, with

paved shoulders 4 feet (1.2 m) wide, on a proposed right-of-way width of 120 feet (36.6 m). For the remainder of the project, the proposed cross-section is a 5-lane curb-and-gutter section, 68 feet (20.7 m) wide from face-to-face of curbs, with 10-foot (3.0-m) berms, on a proposed right-of-way width of 100 feet (30.5 m). These proposed cross-sections will accommodate anticipated bicycle traffic. The project will follow the existing alignment of SR 1003, except for approximately 0.5 miles (0.8 km) which will be built on new location as shown on Figure 1. A 300-foot (91-m) extension of SR 1565 will be required as shown on Figure 1.

This project will likely require no business relocations and one residential relocation. The total cost including construction and right-of-way is estimated to be \$10,600,000.

Right-of-Way	.....	\$ 3,900,000
Construction	.....	<u>6,700,000</u>
Total Cost	.....	\$10,600,000

#### IV. OTHER COMMENTS

An environmental screening was not conducted for this study. No historic properties or endangered species are anticipated, however some wetlands will likely be encountered.

The City of Goldsboro requested that SR 1003 be widened to a 3-lane cross-section. With the 3-lane cross-section, the LOS is estimated to be LOS C (very close to D) in 1996, and LOS E in 2020. The 3-lane cross-section is not recommended because of the estimated poor LOS. The total cost including construction and right-of-way for the 3-lane alternative is estimated to be \$ 7,700,000 as follows:

Right-of-Way	.....	\$ 2,700,000
Construction	.....	<u>5,000,000</u>
Total Cost	.....	\$ 7,700,000

