

FEASIBILITY STUDY

Fayetteville  
Bunce Road (SR 1411 & SR 1410)  
From US 401  
To Cliffdale Road (SR 1400)  
Cumberland County  
U-3424

Prepared by  
Program Development Branch  
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I. GENERAL DESCRIPTION

This preliminary study describes the potential widening of Bunce Road (SR 1411 & SR 1410) from US 401 to Cliffdale Road (SR 1400) in Fayetteville. The project location is shown on Figure 1. The studied cross-section is a 5-lane curb and gutter section for the entire project length of 1.3 miles (2.1 km). The required right-of-way width is 100 feet (30.5 m). Cost estimates were made for alternates with both 4-lane and 3-lane cross-sections.

No residential or business relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be \$5,300,000 for the 5-lane section.

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 Bunce Road in Fayetteville. The 5-lane project was requested by the Transportation Advisory Committee of the Fayetteville Urban Area and is supported by the City of Fayetteville. This project is the northern link in the Bingham Drive Corridor which will connect the residential areas south of US 401 and in Hope Mills with Cliffdale Road and the Cross Creek Mall Shopping complex. The 5-lane curb and gutter cross-section is consistent with the 5-lane curb and gutter cross-section recommended for Bingham Drive under project U-3311.

Bunce Road is classified as a Urban Collector in the North Carolina Statewide Functional Classification System, and is a Major Thoroughfare on the Fayetteville Urban Area Thoroughfare Plan. Land use along the project corridor is mostly single family residential. There is a convenience store located at each project terminal.

Existing Bunce Road is a two-way, two-lane road with grass shoulders. The US 401 intersection and the Cliffdale Road intersection are controlled with traffic signals.

Traffic volume estimates for Bunce Road for the years 1995 and 2020 are 7,200 vehicles per day (vpd) and 10,000 vpd respectively. The Level of Service (LOS) without the proposed improvements is estimated to be Level C in 1995 and Level D in 2020. With the proposed improvements the LOS is estimated to be LOS A in 1995 and LOS A in 2020.

During the three year period beginning March 1, 1992, and ending February 28, 1995, there were 102 accidents reported on Bunce Road within the project limits. This resulted in a total accident rate of 1,078 accidents per 100 million vehicle miles (ACC/100MVM), which is three times greater than the statewide average of 348 ACC/100MVM for all urban secondary routes, in North Carolina, for 1994.

There were no fatal accidents reported, however, 54 accidents resulted in 90 injured persons. The most prevalent type accidents were Rear-End (35%), Left-Turn (30%), Ran Off Road (10%), and Angle (10%). The proposed wider cross-section with a center turn lane and greater capacity, will reduce the potential for these type accidents.

### III. STUDIED ALTERNATES

The studied improvement is to widen Bunce Road from US 401 to Cliffdale Road in Fayetteville. The project location is shown on Figure 1. The studied cross-section is a 5-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs, consisting of 2 travel lanes in each direction of travel, and a two-way center turn lane. Also, berms, 8 feet (2.4 m) wide, will be constructed outside the curbs on each side.

The project length is 1.3 miles (2.1 km). The required right-of-way width is 100 feet (30.5 m).

No residential or business relocations are anticipated due to this project.

The existing traffic signals at the project terminals will require minor revisions.

The total cost including construction and right-of-way for the 5-lane section is estimated to be \$5,300,000 as follows:

Construction.....	\$4,100,000
Right-of-Way.....	<u>1,200,000</u>
Total Cost.....	\$5,300,000

#### IV. OTHER COMMENTS

An environmental screening was not conducted for this study. No wetlands, historic properties, or endangered species are anticipated.

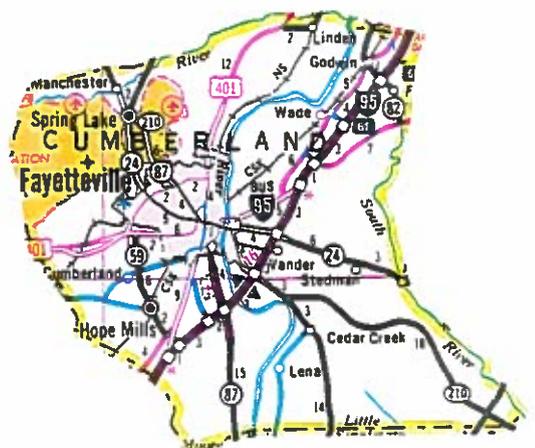
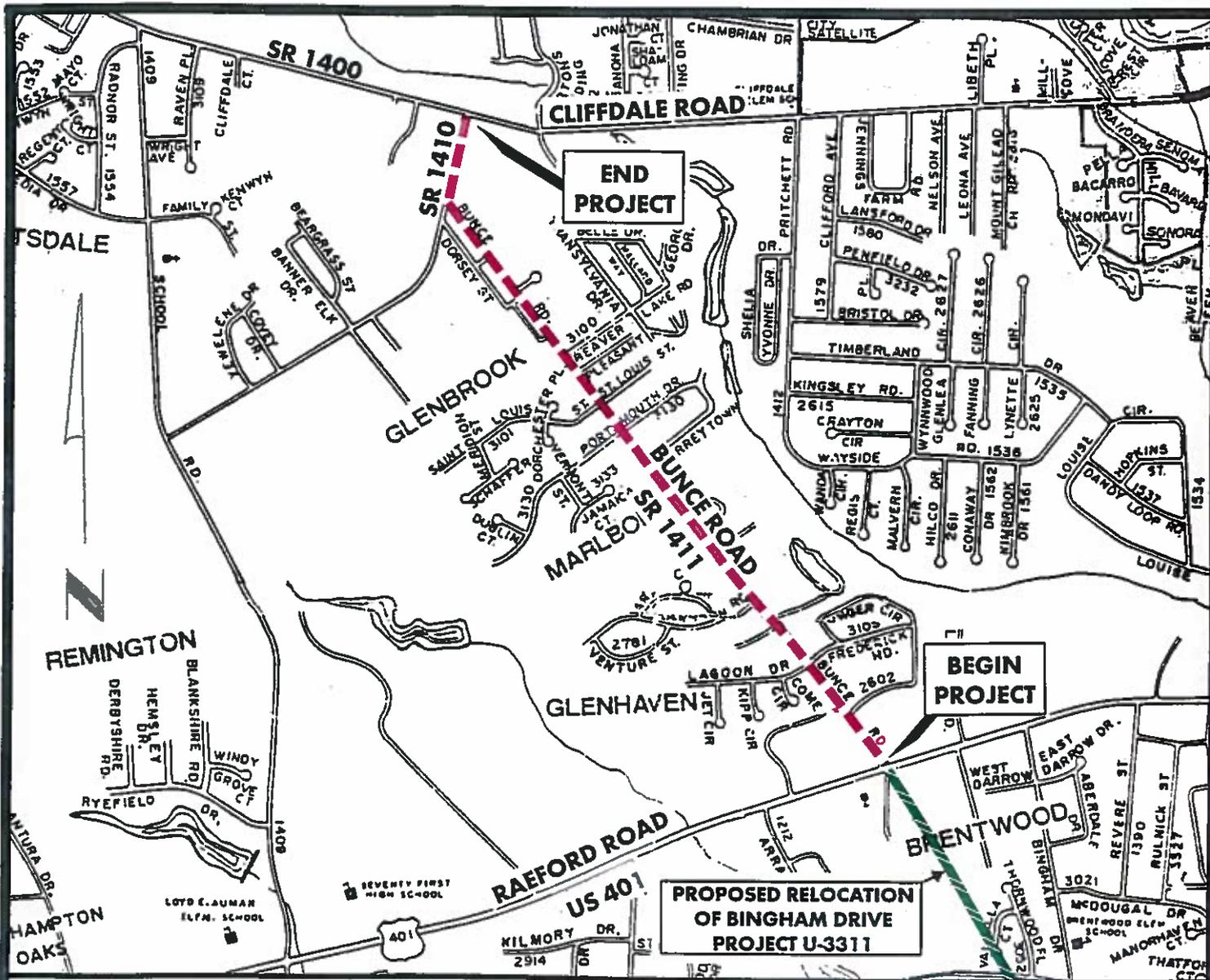
The Cumberland County planning staff has determined that bicycle facilities would serve a local need for the mid-to-low-income housing district through which Bunce Road passes. A 5-lane cross-section 68 feet (20.7 m) wide will allow outside lanes 14 feet (4.2 m) wide to accommodate this need. This wider cross-section is estimated to cost \$200,000 more than the proposed section which is 64 feet (19.5 m) wide.

A cost estimate for a 4-lane, 52-foot (15.8-m) wide curb and gutter cross-section was made. The total project cost with a 4-lane cross-section is estimated to be \$4,800,000 as follows:

Construction.....	\$3,600,000
Right-of-Way.....	<u>1,200,000</u>
Total Cost.....	\$4,800,000

A cost estimate for a 3-lane, 40-foot (12.2-m) wide curb and gutter cross-section was made. The total project cost with a 3-lane cross-section is estimated to be \$4,300,000 as follows:

Construction.....	\$3,100,000
Right-of-Way.....	<u>1,200,000</u>
Total Cost.....	\$4,300,000



**FEASIBILITY STUDIES UNIT**

**FIGURE 1. PROJECT LOCATION**  
**Bunce Road (SR 1411 & SR 1410)**  
**from US 401**  
**to Cliffdale Road (SR 1400)**  
**in Fayetteville**

**Cumberland County Div 6 U-3424**

SCALE IN TENTHS OF A MILE

