

FEASIBILITY STUDY

Fayetteville
SR 1400 (Cliffdale Road)
From Reilly Road to US 401
Cumberland County
U-2520

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

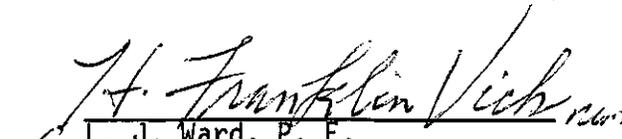


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I. DESCRIPTION

This report covers the improvement of Cliffdale Road from Reilly Road to US 401, a distance of approximately 4.8 miles (see Figures 1 and 2). This project is included in the 1990-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection. No funds have been appropriated for this project.

II. PURPOSE OF PROJECT

Existing Route Characteristics

Cliffdale Road serves as a major thoroughfare in the mutually adopted Fayetteville Thoroughfare Plan. It is also classified as a rural major collector in the North Carolina Functional Classification System.

The existing cross section on Cliffdale Road is basically a 22-foot paved roadway with 8-foot grassed shoulders except at the Montibello Shopping Center near SR 1402 where it widens to three lanes to provide for left-hand turns into the shopping center and SR 1402. The speed limit along Cliffdale Road from Reilly Road to SR 2690 is 55 mph. At SR 2590 it changes to 45 mph and continues to US 401.

The right-of-way along Cliffdale Road is basically 60 feet with the exception of the last 1100 feet approaching US 401 where it becomes 80 feet. Power poles were observed on both sides of the facility along the project length.

The bridge carrying remaining Cliffdale Road over Bones Creek was built in 1968. The bridge is 52 feet long with a roadway width of 28 feet. It is not in good condition and will have to be replaced when the project is built. It has an estimated remaining life of 5 years and a sufficiency rating of 50.8 out of a possible 100 points.

The development along Cliffdale Road is mostly residential with the exception of the Montibello Shopping Center and a power substation. The area is growing rapidly, with new subdivisions being developed along both sides of the project.

Traffic Volumes, Capacity and Accident Record

The current traffic volume along Cliffdale Road is approximately 7600 vehicles per day (vpd). This volume is projected to increase to 14,000 vpd by the year 2010. With this projected volume, capacity will be exceeded during the planning period if no improvements are made.

During the period from January 1, 1986 through September 30, 1989 a total of 225 accidents was reported along the studied portion of Cliffdale Road. This resulted in an accident rate of 459 accidents per 100 million vehicle miles (acc/100 mvm), compared to a statewide average of 378 acc/100 mvm for all urban secondary routes over the same period. There were no fatalities during the period, and 100 of the accidents resulted in injuries. The predominant types of accidents were running off the road, rear-end, and angle collisions which accounted for over 70% of the reported accidents. Increasing the capacity of route will reduce congestion and improve driver safety.

Need for Project

The existing two-lane width along Cliffdale Road is not adequate to handle the increasing traffic demand. With the area developing as rapidly as it is, additional lanes are immediately warranted.

III. OTHER PROGRAMMED PROJECTS AFFECTING CLIFFDALE ROAD

There are three projects in the area affecting the studied segment of Cliffdale Road. One project (U-2103), Reilly Road from the intersection of Cliffdale Road north, is presently under construction to provide five lanes, and Cliffdale Road from the intersection east, is scheduled for construction to provide five lanes in FFY 1991. The second project (R-214) will relocate a short section of US 401, with a four-lane divided facility in the area where Cliffdale Road now intersects US 401. Construction is scheduled for FFY 91. The third project, the Fayetteville Outer Loop (U-2519), which will be located parallel to and just west of Reilly Road, will be a controlled access facility with interchanges proposed at US 401 and Cliffdale Road. Right-of-way acquisition is scheduled to begin in FFY 96.

IV. RECOMMENDATIONS AND COSTS

Upgrading Cliffdale Road from Reilly Road to US 401 to a multi-lane facility is highly desirable. The recommended cross section is a 5-lane, 64-foot face to face of curbs section. Acquisition of an estimated 100-foot right-of-way width will be necessary to contain construction limits. Symmetrical widening about the centerline of the existing roadway is recommended except at the relocated portion near Reilly road. Relocation is necessary to accommodate a future interchange with the Outer Loop and to keep Cliffdale Road off Fort Bragg property. The estimated costs of this project are as follows:

Construction	\$ 7,800,000
Right-of-Way	\$ 4,400,000
Total	\$12,200,000

The construction cost includes engineering and contingencies, and the right-of-way cost includes relocation, acquisition, and utility costs. Cost estimates were prepared by the Preliminary Estimate Engineer and the Right-of-Way Branch.

V. ALTERNATIVES CONSIDERED

Since the proposed project involves the widening of an existing highway, no alternative alignments were considered.

A four-lane cross section was considered for the improvement to Cliffdale Road. The four-lane alternative would cost less than the recommended five-lane cross section, but the interference of existing driveways and side streets and the turning traffic which they generate would create a capacity deficiency on this section before the end of the planning period. Without the center turn lane, the roadway would not only have a capacity deficiency, but would have a higher accident potential due to the high number of turns. Drivers are accustomed to using the left lane of a highway as a high speed through lane and are not expecting vehicles to be stopped or turning from this lane. The four-lane cross section would not appreciably lessen the accident potential for rear-end and angle collisions over the present roadway, and these have been the predominant types of accidents on this highway in the past. Due to the inadequate capacity, the difficulty of turning into adjacent development, and the higher accident potential, a four-lane cross section is not recommended.

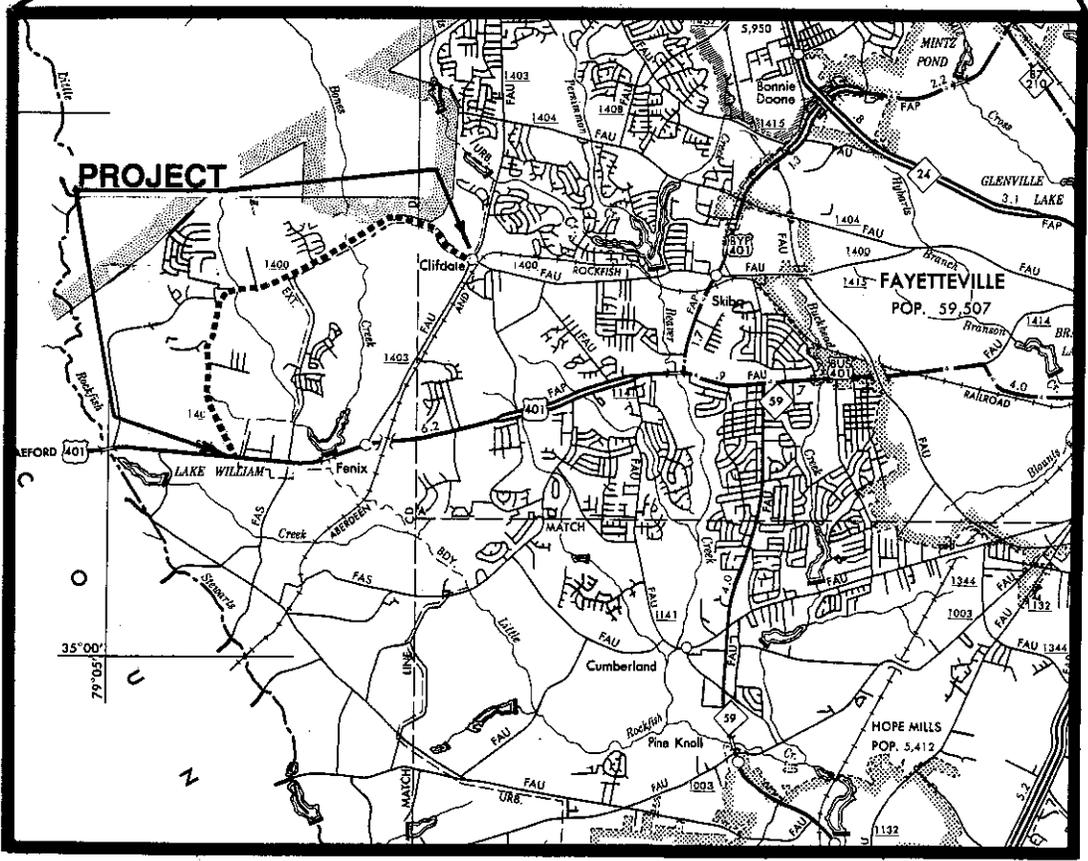
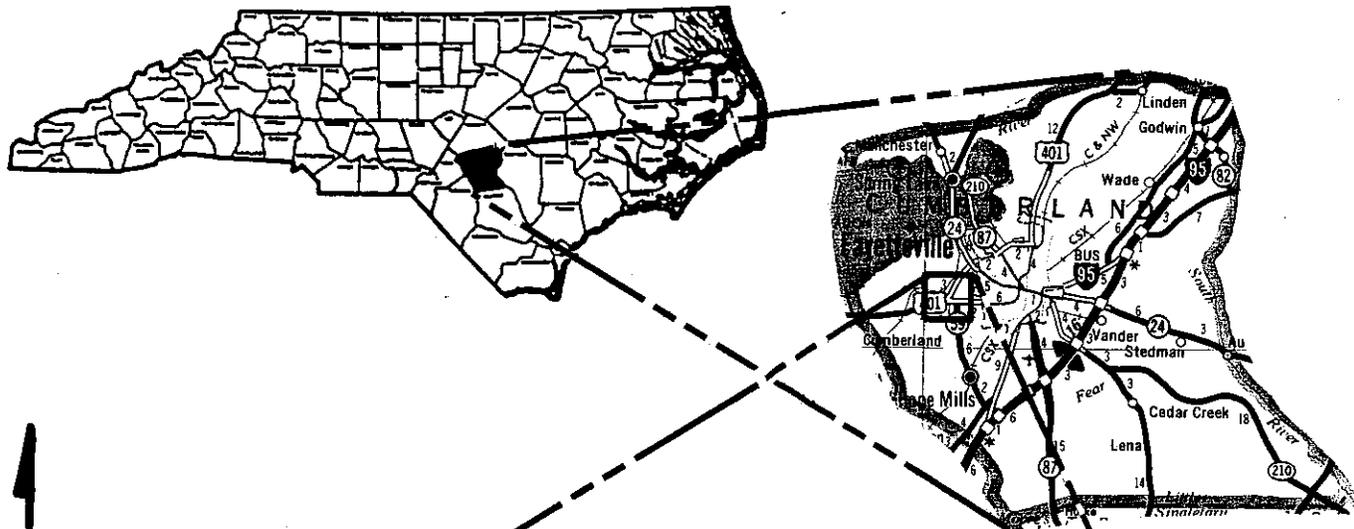
VI. ENVIRONMENTAL EFFECTS

The most significant impact to the environment is the relocation of 17 residences. Other impacts will be primarily related to the actual construction of project and will cease upon completion of the project. These include minor erosion and siltation, increased noise levels from construction machinery, and delay and inconvenience to motorists.

VII. FUTURE ACTIVITIES

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning/environmental document prior to that time, and a final decision made as to the most appropriate improvement.

BB/rm




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FORT BRAGG

**PROPOSED
RELOCATION**

**FUTURE
INTERCHANGE**

PROJECT

PROPOSED OUTER LOOP



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0 .5 miles

FIG. 2

