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FEASIBILITY STUDY

SR 1714 (Nashville Road)
From Tar River to NC 97, Nash County
U-2563

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



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4/3/90
Date

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I. GENERAL DESCRIPTION

This report covers the improvement of Nashville Road from the Tar River to NC 97, a distance of 0.6 of a mile (see Figure 1). 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

Nashville Road serves as a major thoroughfare in the mutually adopted Rocky Mount Thoroughfare Plan (see Figure 3). It is also classified as an urban minor arterial in the North Carolina Functional Classification System and is a Federal Aid Urban route.

The existing cross section on Nashville Road is 31 feet face to face of curbs operating as two lanes with no parking allowed except at the Tar River Bridge where it transitions to three lanes to provide a left turn lane for the Hammond Street traffic. The right-of-way varies from 35 to 50 feet. Development closely abuts both sides of the facility. Utility poles carrying large transmission lines are set just back of the curb on the south side, with power poles set close to the curb on the north side. The speed limit is 35 mph.

The bridge carrying Nashville Road across the Tar River was built in 1959. The bridge is 235 feet long with a roadway width of 44 feet. The bridge is in good condition with a sufficiency rating of 85.1 out of a possible 100 points.

The development along Nashville Road is mostly heavy density residential with the exception of two commercial establishments, the Calvary Baptist Church, and the Rocky Mount Arts and Crafts Center.

Traffic Volumes, Capacity and Accident Record

The current traffic volume along SR 1714 is approximately 7800 vehicles per day (vpd). This volume is projected to be 14,000 vpd by the year 2010. With this projected volume, capacity will be exceeded during the planning period.

During the period from January 1, 1986 through September 30, 1989 a total of 74 accidents were reported along the studied portion of SR 1714, yielding a total accident rate of 1109 accidents per hundred million vehicle miles. This is much above the statewide average of 378 accidents per hundred million vehicle miles for similar urban secondary routes. The predominant types of accidents were rear-end and angle, which accounted for 58 percent of the total accidents.

Need for Project

The capacity and safety of the existing road is approaching critical conditions that can only be solved either by the provision of additional lanes along Nashville Road or utilizing a one-way pair with Paul Street.

III. OTHER PROGRAMMED PROJECTS AFFECTING NASHVILLE ROAD

There are two programmed projects affecting Nashville Road. One project (U-2310) starts at Nashville Road and Raleigh Road and extends south on Raleigh Road (NC 97) to US 301 Bypass. A 5-lane curb and gutter section is proposed, with right of way acquisition starting in FFY 91 and construction scheduled for FFY 92. The other programmed project (U-2219) starts on SR 1714 at the Tar River and extends westward to SR 1805, a distance of 2.7 miles. It also recommends a 5-lane curb and gutter section with right of way acquisition in progress and construction beginning in FFY 90.

IV. RECOMMENDATIONS AND COSTS

As shown on Figure 2, a one-way pair of Nashville Road and Paul Street is the recommended alternative, since it would better handle the anticipated future traffic and is the most economical of the alternatives studied. A connector would be needed from Paul Street at Hammond Street to the Tar River Bridge to complete the system. Widening of the bridge to a roadway width of 59 feet would be necessary to accommodate five 11-foot lanes, two lanes in each direction and a center turn lane for Hammond Street. The recommended bridge width matches the planned cross section on the U-2219 project. Paul Street is a 31-foot face to face of curbs section with a right of way width varying from 35 to 50 feet. It is a city street and would have to be put on the state system before any state monies could be spent on improvements. For better traffic operations, it would be desirable to extend the one-way pair beyond NC 97 to US 301 business. Nashville Road between NC 97 and US 301 business is classified as a minor thoroughfare. Both streets would need to be resurfaced to accommodate future traffic volumes. The total cost for the one-way pair, including widening of the Tar River Bridge, is estimated to be \$ 850,000 with \$ 775,000 for construction and \$ 75,000 for right-of-way. The construction cost includes engineering and contingencies and the right-of-way cost includes acquisition and utility costs. The cost estimates were prepared by the Preliminary Estimate Engineer and the Right-of-Way Branch.

V. ALTERNATIVES

An alternative to the recommended one-way operation is to widen Nashville Road including the Tar River Bridge to 59 feet, face to face of curbs. Widening would be symmetrical except for the last two blocks approaching NC 97, where widening would be shifted to the south to avoid the Calvary Baptist Church. Some construction east of Raleigh Road

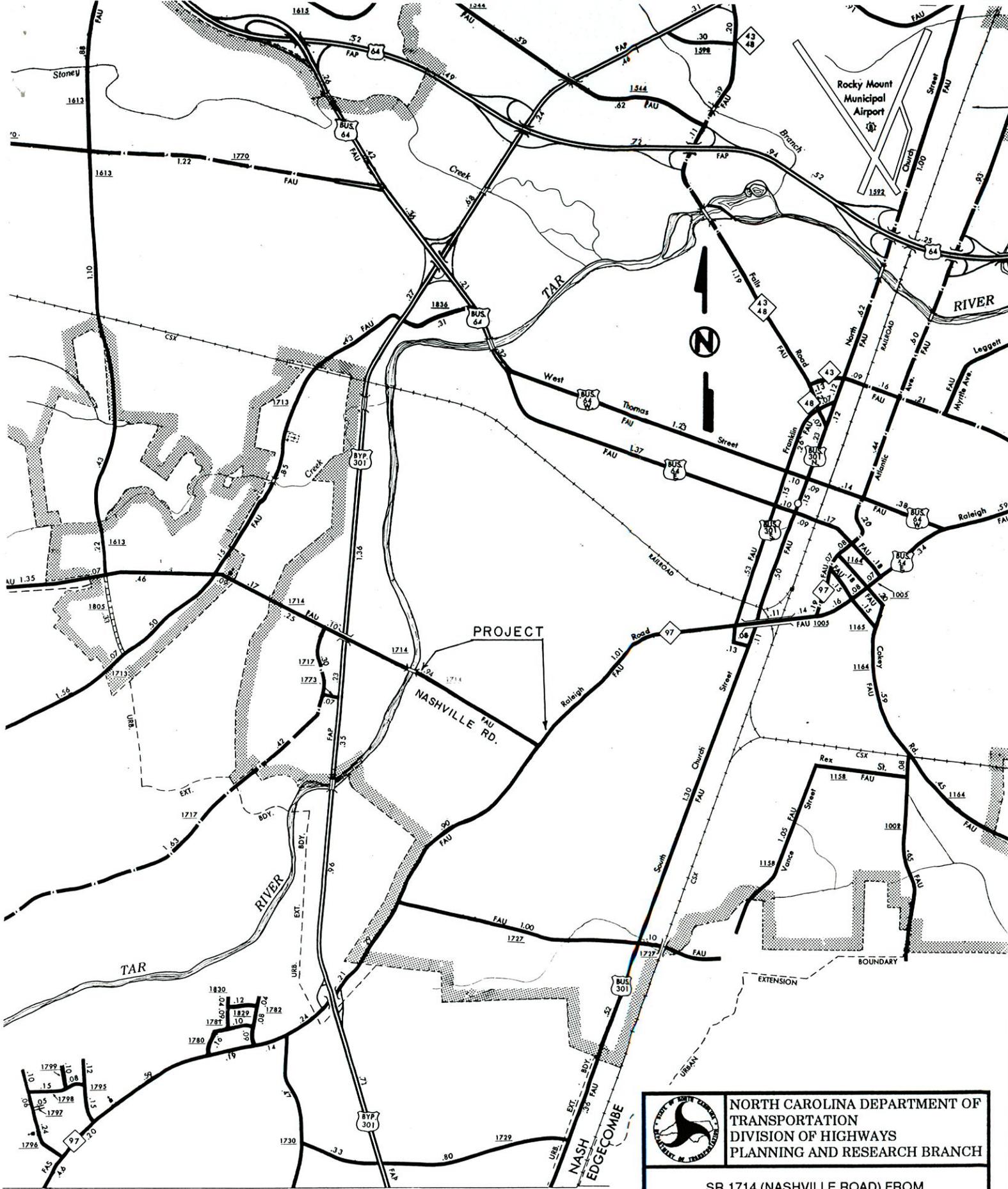
(NC 97) would be necessary to taper the 5-lane section back to the existing 2-lane section. Eight residential relocations would be necessary along with one business relocation. The total cost of widening Nashville Road is \$ 3,275,000, with \$ 1,275,000 for construction and \$ 2,000,000 for right-of-way.

Widening Nashville Road entirely to the north (with the exception of the last two blocks approaching NC 97) was also looked at. In this case, 25 residences and one business would be affected. The total cost is estimated to be \$ 4,050,000, with \$ 1,200,000 for construction (including widening the Tar River Bridge) and \$ 2,850,000 for right-of-way.

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 the planning/environmental document prior to that time, and a final decision made as to the most appropriate improvement.

RJB/sdt



ROCKY MOUNT

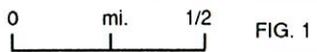
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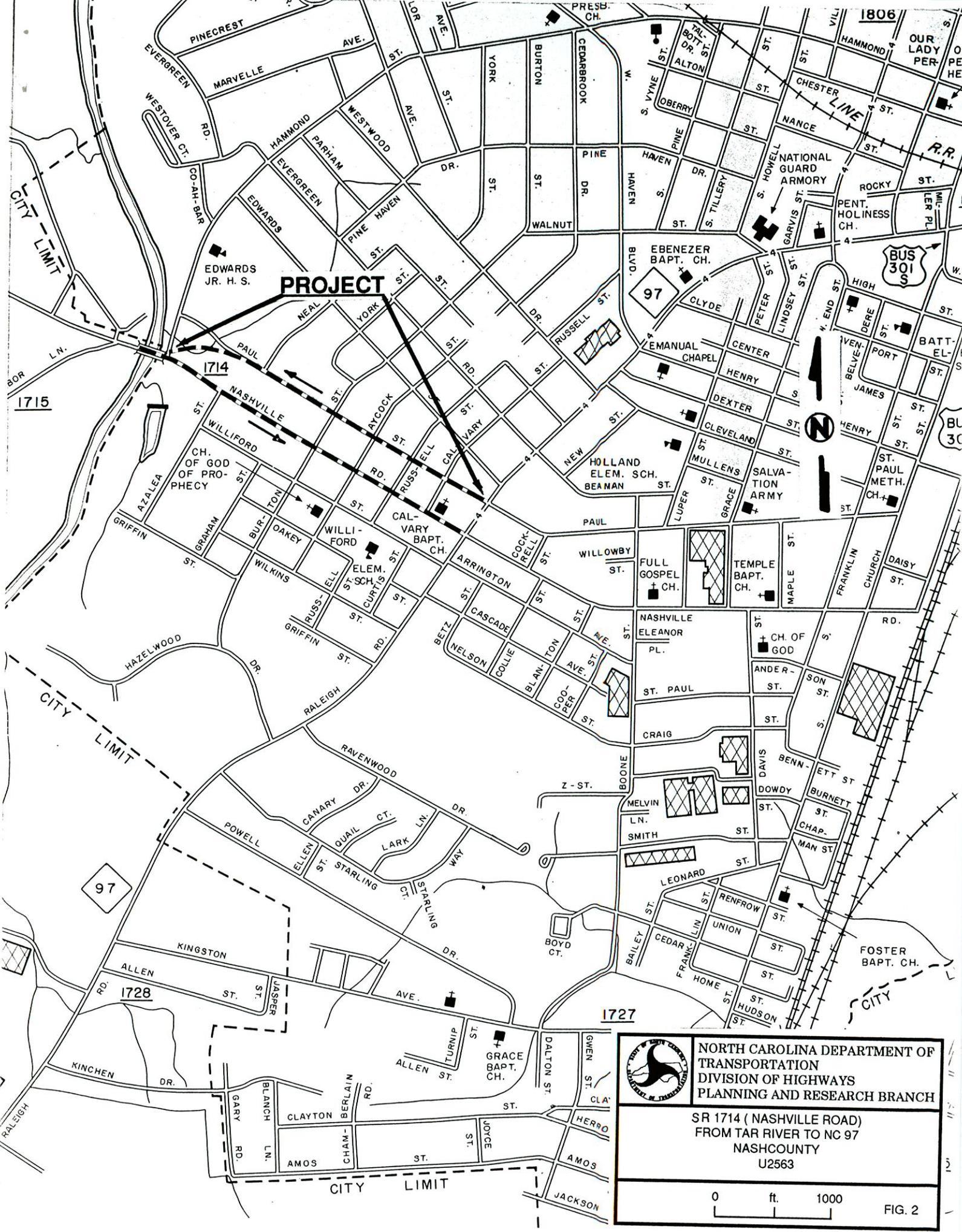
NASH	24,205
EDGEcombe	17,078



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**SR 1714 (NASHVILLE ROAD) FROM
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U-2563**





PROJECT



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FROM TAR RIVER TO NC 97
NASHCOUNTY
U2563**

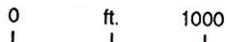
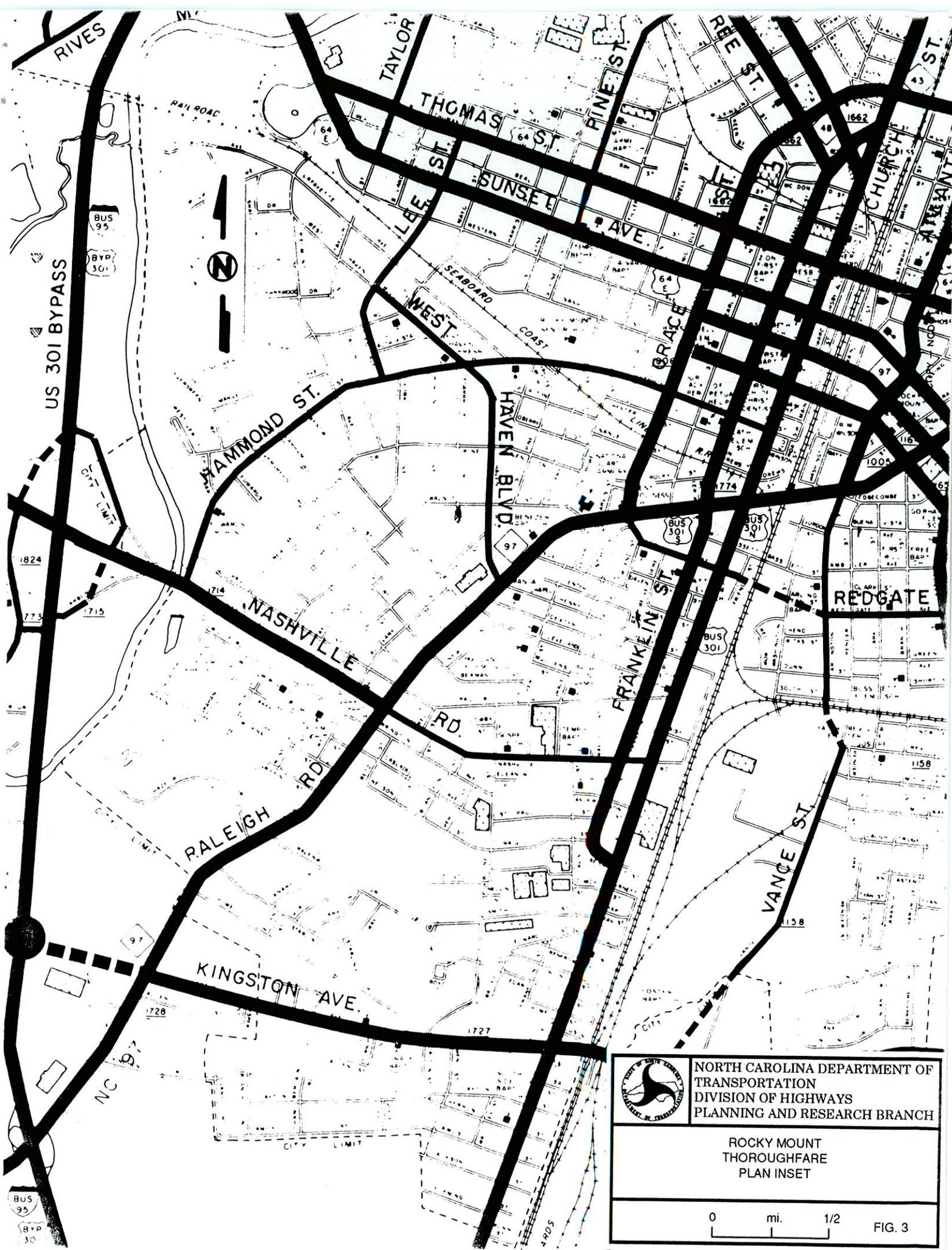


FIG. 2



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ROCKY MOUNT
THOROUGHFARE
PLAN INSET

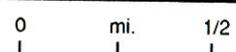


FIG. 3