

FEASIBILITY STUDY

US 64
From Cashiers to Rosman
Jackson and Transylvania Counties
R-2409

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

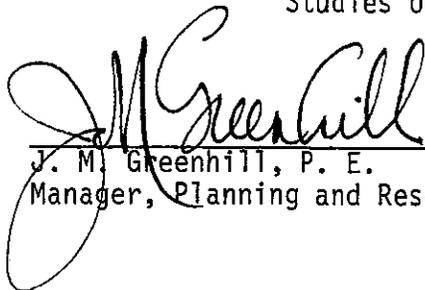


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I. GENERAL DESCRIPTION

This report covers the widening and realignment of US 64 to an improved two lane highway from NC 107 in Cashiers to US 178 in Rosman. The project is 20.2 miles long and is shown on Figures 1 and 2. This project is included in the 1988-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection.

II. PURPOSE OF PROJECT

Existing Route Characteristics

US 64 is the major east-west route in southwestern North Carolina. US 64 provides a wide variety of highway service, including access to adjacent development, a through route for travelers, a truck route, and a scenic route for vacationers. US 64 is a Proposed Critical Connector in the North Carolina Strategic Corridor System. It is also classified as a Minor Arterial in the North Carolina Functional Classification System and is a Federal Aid Primary Route.

The existing cross section consists of a mixture of 18 and 20-foot pavement widths with unpaved shoulders varying from 2 to 4 feet wide. The roadway is located in the center of a 30-foot claimed right-of-way. The rugged terrain combined with fact that most of this highway was originally constructed in the 1920's has resulted in poor horizontal and vertical alignment for most of the project length. There are many grades along the project in the 6% to 9% range and numerous curves greater than 10°. There are several curves that cannot be negotiated by large trucks without crossing the center line due to the combination of sharp curvature and narrow cross section. Although the existing roadway is bordered by minimal shoulders and high embankments there is little use of guard-rail on the project. There are only five short passing zones in the entire 20 mile project length. All intersections along the project are at grade. The intersection with NC 107 in Cashiers is signalized, while all other intersections along the project are stop sign controlled.

There are three bridges on the studied section of US 64 with all three being located in Transylvania County. The first is where US 64 crosses Rock Creek with a 32-foot long bridge. The bridge has a clear roadway width of 20 feet and was built in 1923. This bridge has a sufficiency rating at 50.8 out of a possible 100 points. The second bridge is located where US 64 crosses the Toxaway River. This bridge is 74 feet long with a clear roadway width of 20 feet. This bridge was also built in 1923 and has a sufficiency rating of 45.6. The third bridge is where the project crosses the North Fork French Broad River (see Figure 3). This bridge is 94 feet long with a clear roadway width of 20.2 feet. This bridge was built in 1924 and has a sufficiency rating of 32.5. Due to the narrow width of the bridges and the curves on their approaches, large trucks are unable to negotiate these bridges without encroaching into the opposite lane. This is especially noticeable at the Toxaway River and North Fork French Broad River Crossings. The bridges at these two river crossings are scheduled for replacement in the NCDOT Transportation Improvement Program (see Section III of this report).

Roadside development varies widely along the studied section of US 64. These are areas of commercial development in Cashiers and Sapphire, as well as other spot locations along the project. Residential development is scattered throughout the project length, and appears to be intensifying. There are two relatively new golf course developments along with the older Lake Toxaway development on the project. This area appears to be becoming an increasingly popular vacation/retirement area. Other development noted along the project includes the Lake Toxaway Church and the T. C. Henderson School located at SR 1166. Due to the steep terrain, there are several areas along the project that are undeveloped. Overhead power and telephone lines were observed along portions of the route.

At the western project terminal, the pavement has been widened to provide separate right and left turn lanes at NC 107 (see Figure 3). Beyond NC 107, US 64 quickly tapers back to an 18-foot pavement. At the eastern project terminal, US 64 has recently been widened and realigned to provide a climbing lane for trucks and a bypass of Rosman.

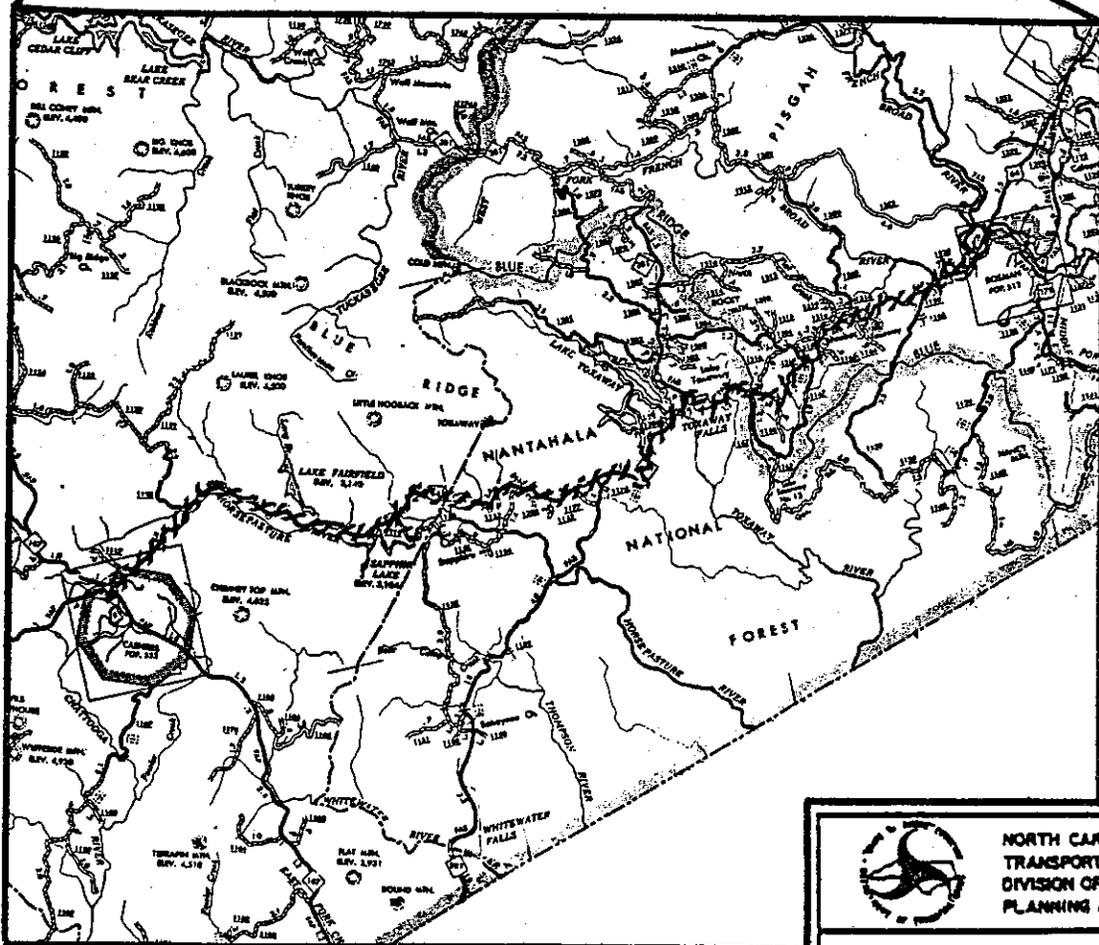
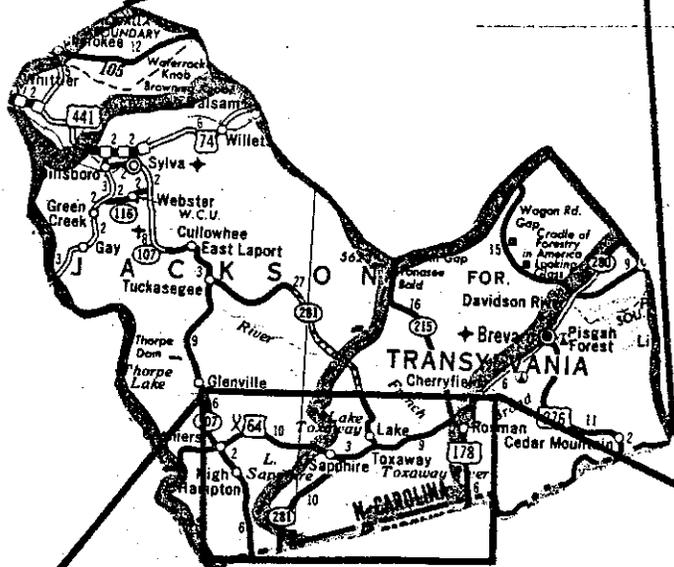
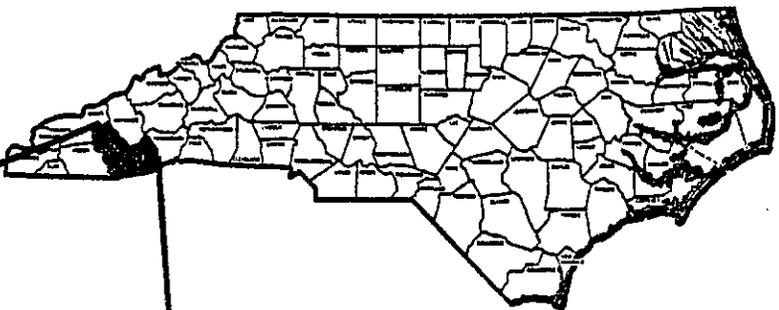
Traffic Volumes, Capacity, and Accident Record

The current traffic volumes range from a high of 7900 vehicles per day (vpd) at the western project terminal to a low of 2900 vpd near SR 1147. These volumes are projected to increase to a high of 14,300 vpd and a low of 5200 vpd, respectively, by the year 2010 (see Figure 4). These are average volumes and subject to increase during the peak summer vacation and fall leaf season. With the current traffic volumes and the existing roadway characteristics, US 64 is operating at Level of Service D or E throughout the project length. This level of service is evidenced by congestion and traffic back-ups at intersections and by long lines of vehicles queing up behind slow moving traffic on the steep grades along the project. The proposed improvements to US 64 recommended in this report will elevate the level of traffic service to Level of Service C or better throughout the planning period.

During the period from January 1, 1985 through December 31, 1987, a total of 205 accidents were reported on the studied portion of US 64. This resulted in an accident rate of 285.9 accidents per 100 million vehicle miles (ACC/100 MVM) which compares to a statewide average of 201.1 ACC/100 MVM for all rural, two-lane US routes over the same period. There were 2 fatalities during the period, and 84 of the accidents resulted in injuries. The primary accident type involved vehicles running off of the roadway. The proposed widening of the pavement and shoulders should reduce the potential for this type of accident.

Need for Project

The widening and improvement of US 64 from Cashiers to Rosman is needed to provide adequate capacity for the existing and future traffic volumes. The project is also needed to enhance the safety of US 64 by providing wider lanes and shoulders along with guardrail in locations where it is needed.





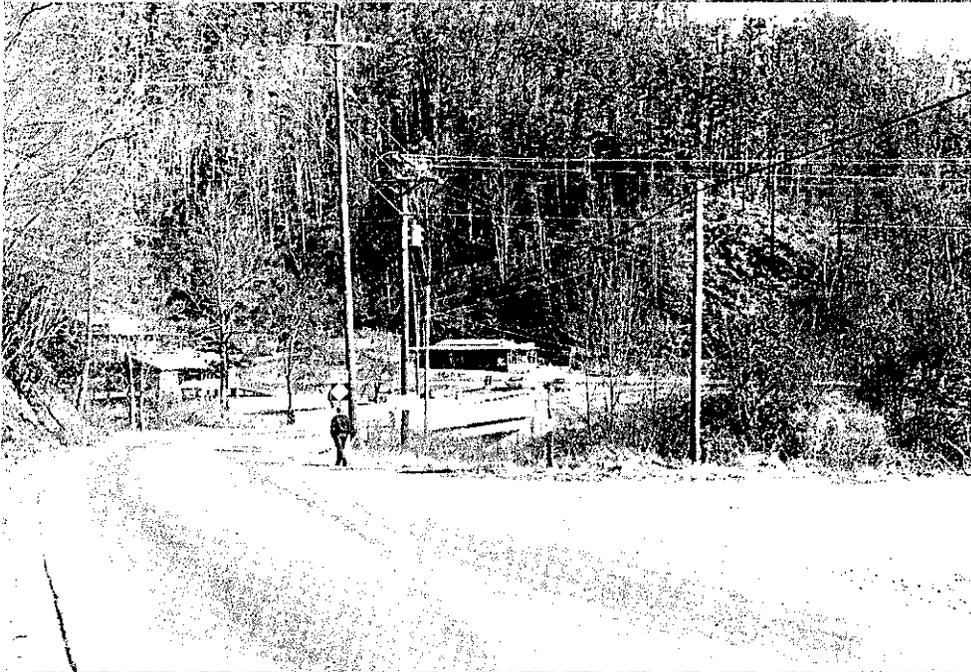
**NORTH CAROLINA DEPARTMENT OF
 TRANSPORTATION
 DIVISION OF HIGHWAYS
 PLANNING AND RESEARCH BRANCH**

US 64
 CASHIERS TO ROSMAN
 JACKSON AND TRANSYLVANIA COUNTIES
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FIG. 1



LOOKING WEST AT
THE NC 107 INTERSECTION



LOOKING EAST AT THE
BRIDGE OVER THE NORTH
FORK FRENCH
BROAD RIVER



LOOKING EAST AT THE
EASTERN PROJECT
TERMINAL

US 64; FROM NC 107 IN CASHIERS TO US 178 IN ROSMAN
ESTIMATED 1990/2010 ADT IN HUNDREDS

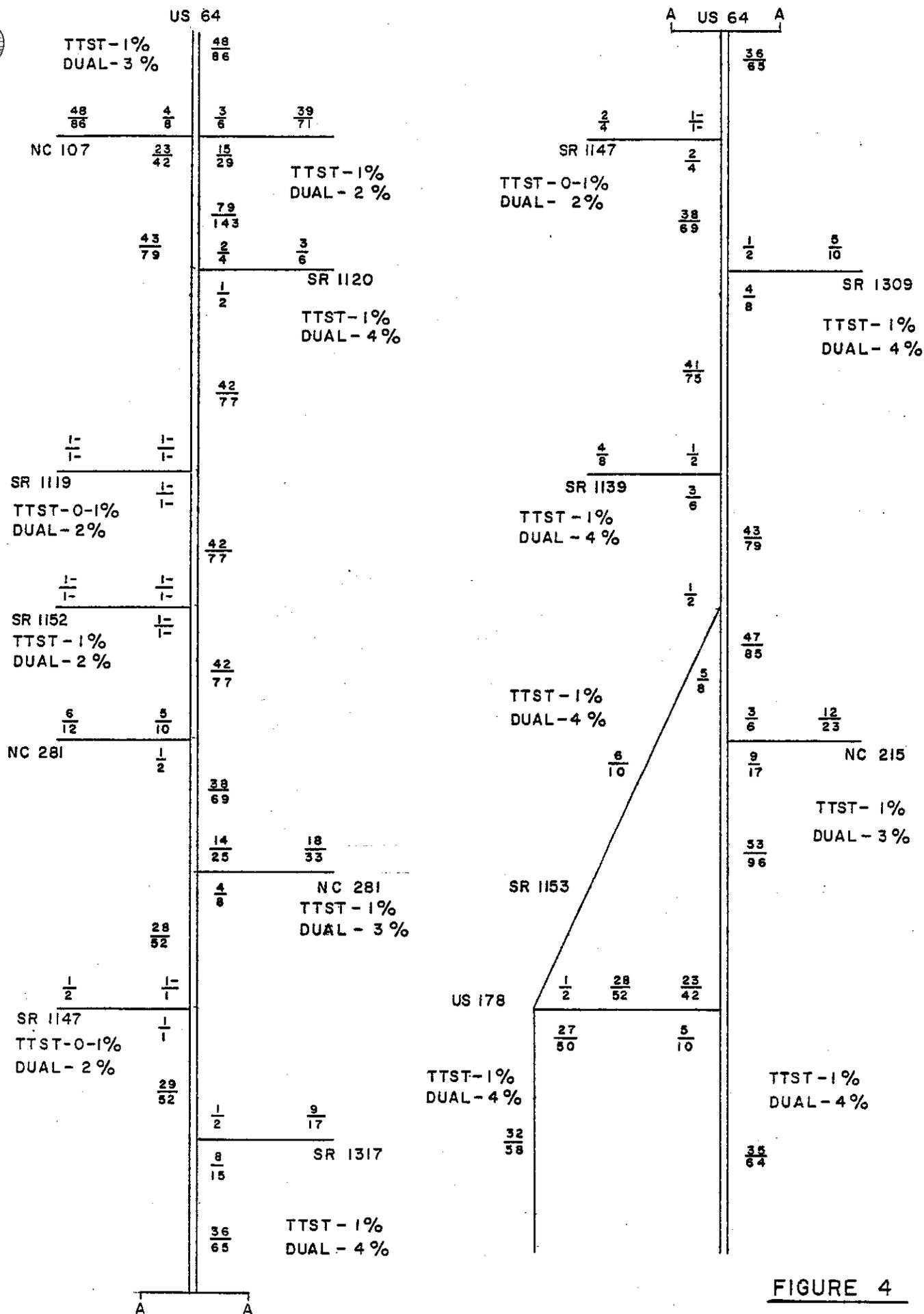
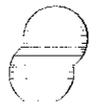
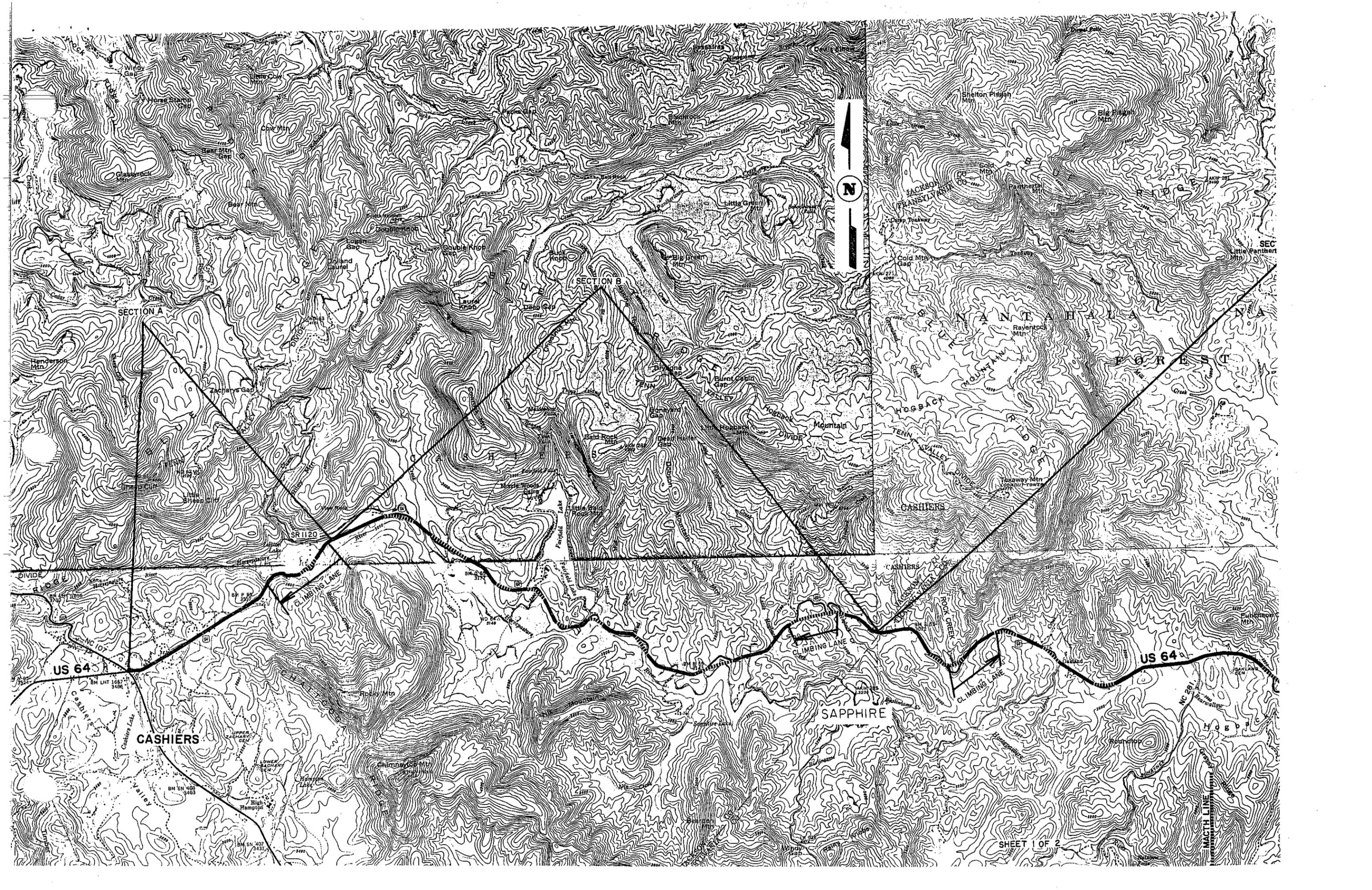


FIGURE 4



SECTION A

SECTION B

NANTAHALA NATIONAL FOREST

US 64

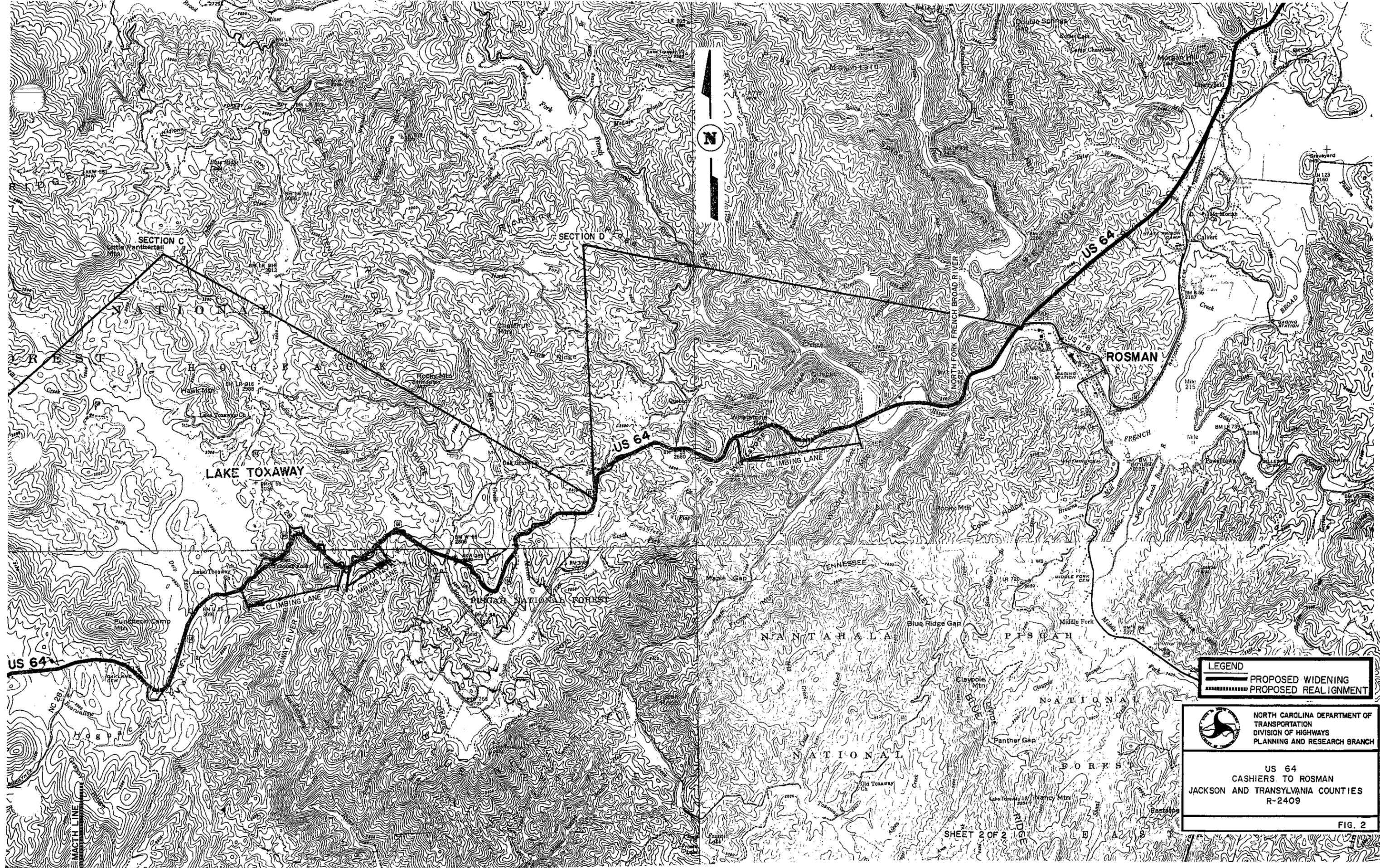
US 64

CASHIERS

SAPPHIRE

SHEET 1 OF 2

MACARTH LINE



SECTION C
Little Panther Mt.

SECTION D

LAKE TOXAWAY

ROSMAN

US 64

CLIMBING LANE

US 64

CLIMBING LANE

CLIMBING LANE

NANTAHALA

PIPSGAW

NATIONAL FOREST

NATIONAL FOREST

LEGEND
 PROPOSED WIDENING
 PROPOSED REALIGNMENT

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FIG. 2

SHEET 2 OF 2