

FEASIBILITY STUDY

Robbinsville

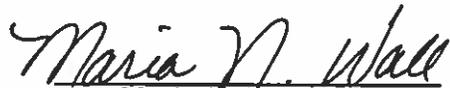
New Route

from SR 1110 to NC 143

Graham County

R-3327

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



Maria N. Wall, P.E.
Highway Planning Engineer

3/14/95
Date



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

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I. GENERAL DESCRIPTION

This is a feasibility study for the construction of a new route outside of Robbinsville, from SR 1110 to NC 143, in Graham County (See Alternate A of Figure 1), an accelerated project within the A-9 Corridor. The recommended corridor is approximately 2.7 miles (4.4 kilometers) in length. The studied typical section, a staged portion of the expected A-9 four-lane typical section, is a two-lane, 24-foot (7.3-meter) wide roadway with 10-foot (3.0-meter) wide paved shoulders on the west side and 10-foot (3.0-meter) wide shoulders (4-foot (1.2-meter) paved and 6-foot (1.8-meter) ABC) on the east side. A 150-foot (45.7-meter) wide right-of-way with full access control is recommended. The estimated cost of the project is \$25,700,000 (\$2,400,000 for right-of-way and \$23,300,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents studied cross sections for improvements, general alignments of improvements, and estimated cost of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues which deserve consideration in the planning and construction stages.

II. NEED FOR PROJECT

The studied improvements are needed to provide additional travel access in the vicinity of Robbinsville. This project is an accelerated section of TIP Project A-9, which proposes a four-lane, median barrier-divided facility primarily on new location from US 19-74-129 in Andrews in Cherokee County to NC 28 east of Almond in Swain County.

Land use is rural residential and undeveloped woodland along this mountainous corridor. During the winter months this area is subject to severe freeze-thaw conditions and landslides. The study corridor begins at SR 1110 and ends at NC 143, a two-lane primary road.

Talula Creek and Sweetwater Creek are classified as trout streams.

The study corridor is located in a potential high quality water zone, and a protected water supply watershed. The Pisgah National Forest is bisected by SR 1110 in southern Graham County.

The average daily traffic (ADT) on the new route is estimated to be 900 vehicles per day (vpd) in 1994 and 1,600 vpd in the design year 2020. This route would operate at a level of service (LOS) A through to the design year 2020. Traffic is expected to increase after the completion of TIP Project A-9.

III. RECOMMENDATIONS

It is recommended that a staged portion of the A-9 project, a two-lane route, be constructed on new location, from SR 1110 to NC 143 in Graham County. The studied typical section is a two-lane, 24-foot (7.3-meter) wide roadway with 11-foot (3.3-meter) wide paved shoulders on the west side and 10-foot (3.0-meter) wide shoulders (4-foot (1.2-meter) paved and 6-foot (1.8-meter) ABC) on the east side. At the junction of the new route with SR 1110 there would be an at-grade intersection. There would also be an at-grade intersection at the junction of NC 143.

An interchange would be constructed at the junction of US 129 and the new route. One bridge would span US 129 and another bridge would span over Talula Creek, the railroad tracks, and SR 1206. Additional bridges and culverts would be placed at stream and creek crossings.

Total project costs are estimated as follows:

Construction Cost	\$23,300,000
<u>Right-of-Way Cost</u>	<u>\$ 2,400,000</u>
Total Project Cost	\$25,700,000

Minimal utility conflicts are expected.

When TIP Project A-9 is constructed in its entirety, the section from SR 1110 to NC 143 would be widened to a four-lane, median barrier-divided roadway with two 12-foot (3.6-meter) wide lanes in each direction, 10-foot (3.0-meter) wide outside shoulders, and 10-foot (3.0-meter) wide inside shoulders with a jersey barrier to separate opposing traffic. This would be constructed on a 150-foot (45.7-meter) wide right-of-way with full control of access. At this time interchanges and or grade separations would be constructed at the junctions with SR 1110 and NC 143.

IV. OTHER COMMENTS AND CONCERNS

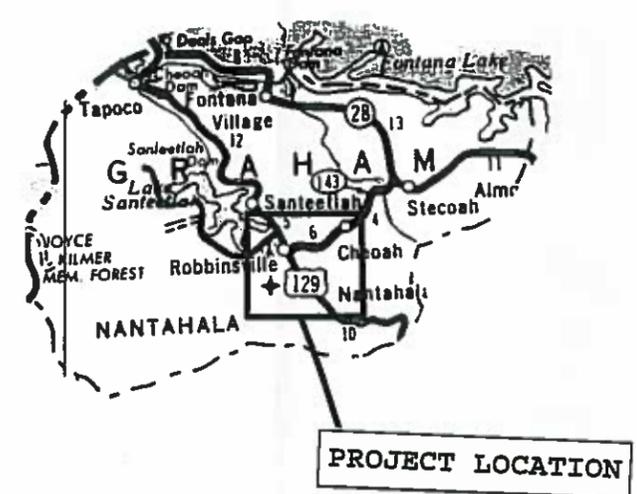
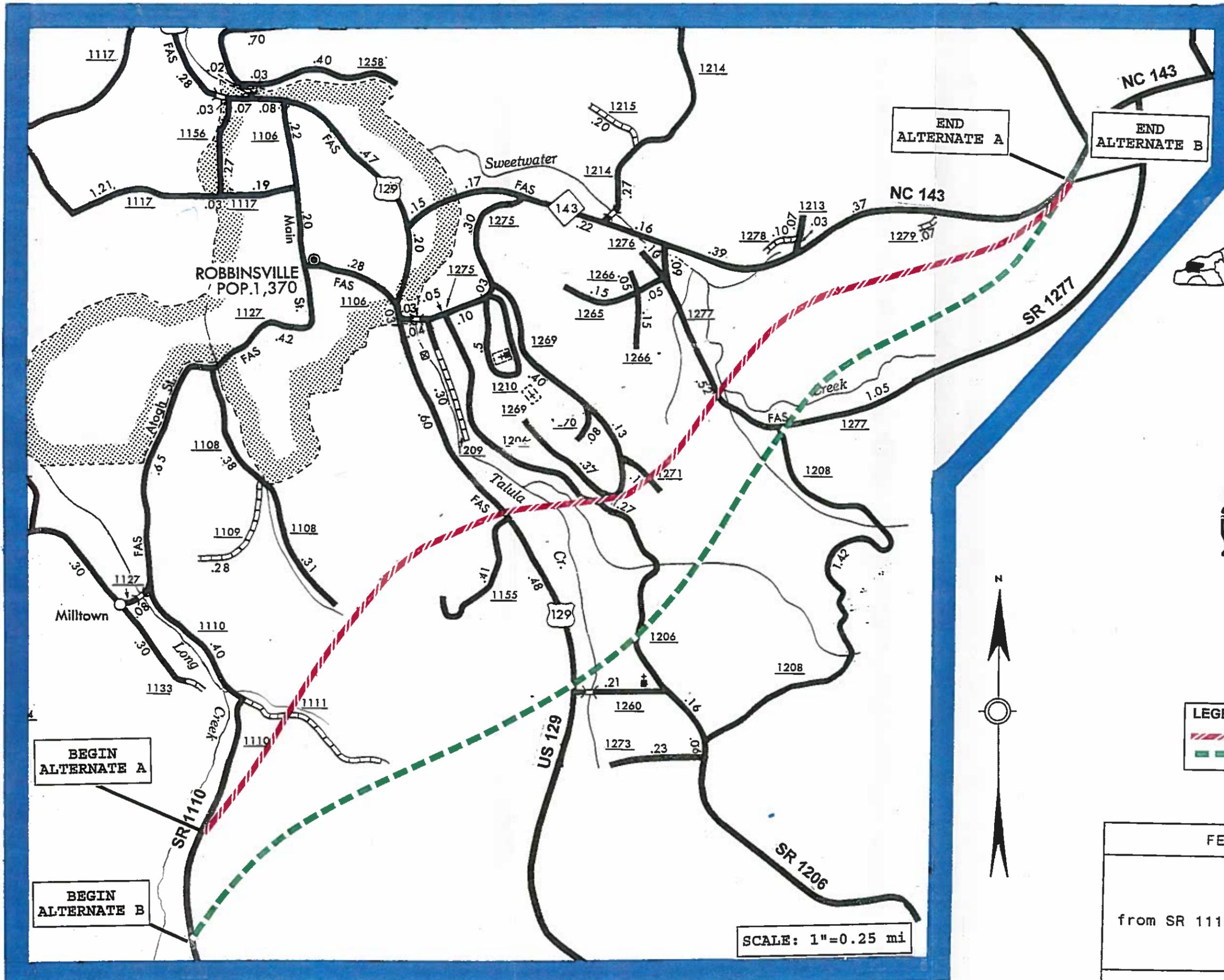
It is estimated that this project would require the relocation of 14 residences.

A National Pollutant Discharge Elimination System (NPDES) Permit may be required. No historical or architecturally significant sites are known to be in the

vicinity of the proposed project. This project does not impact the Pisgah National Forest.

V. OTHER ALTERNATIVES CONSIDERED

An alternate corridor was studied (See Alternate B of Figure 1). This alternate is approximately 3.0 miles (4.8 kilometers) in length. Alternate B was estimated to cost \$47,800,000 (\$2,100,000 for right-of-way and 45,700,000 for construction). It was estimated that there would be 18 residential relocations. The severely mountainous terrain along this corridor greatly increased the construction cost, so this alternate was rejected.



LEGEND
 - - - - - ALTERNATE A (RECOMMENDED)
 - - - - - ALTERNATE B

BEGIN ALTERNATE A

BEGIN ALTERNATE B

END ALTERNATE A

END ALTERNATE B

SCALE: 1"=0.25 mi

FEASIBILITY STUDY UNIT	
R-3327	
New Route from SR 1110 to NC 143 near Robbinsville	
Graham County	
DIV 14	FIGURE 1