

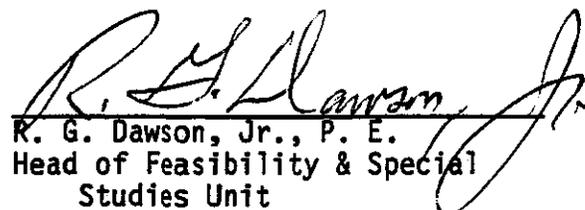
FEASIBILITY STUDY

Cleveland County, SR 2283
(Dixon School Road) Extension
at Kings Mountain, From NC 216 to US 74,
R-2625

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



Marc Hamel
Project Planning Engineer



R. G. Dawson, Jr., P. E.
Head of Feasibility & Special
Studies Unit

9-24-90
Date


E. J. Ward, P. E., Manager
Planning and Environmental Branch

Cleveland County, SR 2283
(Dixon School Road) Extension
at Kings Mountain, From NC 216 to US 74,
R-2625

I. DESCRIPTION

This report covers a preliminary study of an extension of SR 2283 (Dixon School Road) west of Kings Mountain from NC 216 to US 74 (see Figure 1 attached). The project on new location is approximately 2.2 miles in length, and appears in the 1990-1996 Transportation Improvement Program (T.I.P.) for feasibility study and or right-of-way protection. It is not currently funded.

II. PURPOSE OF PROJECT

Function and General Location of Project

The project appears as a proposed major thoroughfare on the Kings Mountain Thoroughfare Plan (see Figure 3).

The proposed extension as shown on Figure 2 would run north/south through the lightly developed areas west of Kings Mountain. This alignment would realign SR 2283 near its intersection with NC 216, crossing NC 216 approximately 800 feet west of the existing intersection. This alignment would also intersect the Southern Railway, SR 2263 (Margrace Road), and SR 2256 (Phifer Road) before tying into US 74.

Existing Conditions

Dixon School Road (SR 2283) is a 2-lane, 18-foot facility with minimal unpaved shoulders constructed on poor horizontal alignment through rolling terrain. To the south, it has an interchange with I-85, providing important access to western Kings Mountain. The speed limit is a posted 35 mph. Development along SR 2283 is primarily small residential, changing to commercial at the interchange. The former Dixon School is located approximately 0.5 mile from NC 216, and is used for commercial purposes at this time. This road presently carries approximately 1700 vehicles per day (vpd).

NC 216 in the project area is a 2-lane, 22-foot shoulder section road with good alignment and a 55 mph speed limit. Development along this route is a mixture of small commercial and residences. NC 216 carries approximately 5000 vpd.

Margrace Road (SR 2263) roughly parallels NC 216 on the opposite side of the Southern Railway in the project area. It has a 2-lane, 18-foot shoulder section, and also has good alignment. Development is primarily small residential. Speed limit along this road is an unposted 55 mph, and it carries approximately 2000 vpd.

Between these routes is the Southern Railway, carrying 18 trains per day. The track has a fairly even grade which results in elevation differences between NC 216, SR 2263, and the railroad. A one-lane, substandard underpass of the railroad between these roads exists approximately 500 feet east of SR 2283.

Phifer Road (SR 2256) roughly bisects the project in an east/west direction. This is an important facility for western Kings Mountain, and the Kings Mountain Middle, Junior, and Senior High Schools are located just east of the proposed extension with a combined enrollment of 2100 students. The remaining development is primarily commercial near US 74, residential near the schools, and sparse residential to the west. The existing 2-lane pavement in the project area is 18 feet wide, and has a speed limit of 35 mph in the city limits and 55 mph outside. It currently carries approximately 5500 vpd.

Where the new extension will intersect, US 74 is a four-lane divided facility surrounded by a mixture of commercial, residential, and industrial development. Speed limit on this road carrying approximately 6300 vpd is 55 mph.

Need for Project

Due to present and projected development in western Kings Mountain, the existing road network will not meet the traffic demands in the near future. Traffic traveling north from the I-85 interchange at SR 2283 currently have few options for going north other than utilizing routes through the city. This taxes the transportation network, and will generate unacceptable levels of service in the near future.

III. RECOMMENDATIONS AND COSTS

Location and Design

As shown on Figure 2, the recommended alignment for the SR 2283 extension begins approximately 0.5 mile south of NC 216. The alignment bends northwest off of the existing road to align with a point on NC 216 where the terrain favors an at-grade railroad crossing. This location is approximately 800 feet west of the existing intersection.

The extension would cross NC 216, SR 2263, and the Southern Railway at grade (with gates and flashers), and proceed on new location to a point on SR 2256 (Phifer Road) approximately 0.4 mile from the Junior High School (see Figure 2). From SR 2256, the alignment continues north on new location to intersect with US 74 directly across from SR 2031 (Elam Road).

It is estimated that the proposed extension of SR 2283 (Dixon School Road) would initially carry approximately 2200 vpd, increasing to approximately 10,000 vpd by the year 2010.

The recommended cross section for this project is an initial 2-lane, 24-foot shoulder cross section on a 150-foot right-of-way to allow for future multi-laning as needed.

The total cost of the recommended improvements is \$ 4,050,000, including \$ 3,300,000 for roadway construction, and \$ 750,000 for right-of-way. Cost estimates were prepared by the Preliminary Estimate Engineer and the Right-of-Way Branch.

IV. ALTERNATIVES

A studied alternative to the recommended plan involved replacement of the at-grade railway crossing with a grade separation along an alternate location shown on Figure 2. Due to the proximity of the paralleling roads, the separation, which would overpass the railroad, would require an interchange with NC 216 and relocation of SR 2263 at adequate distance away from the separation. A minimum design half clover interchange with two-way ramps was considered to minimize costs.

The total cost of the entire extension with a railroad grade separation/NC 216 interchange included is \$ 8,100,000, with \$ 6,700,000 for roadway construction and \$ 1,400,000 for right-of-way. This alternative would double the cost of the recommended plan, and in addition, necessitate the relocation of 6 additional residences.

Although a grade separation would be desirable in view of the magnitude of train volume, the significant additional cost due to the parallel roads and unfavorable terrain makes this alternative economically unjustified.

V. OTHER COMMENTS

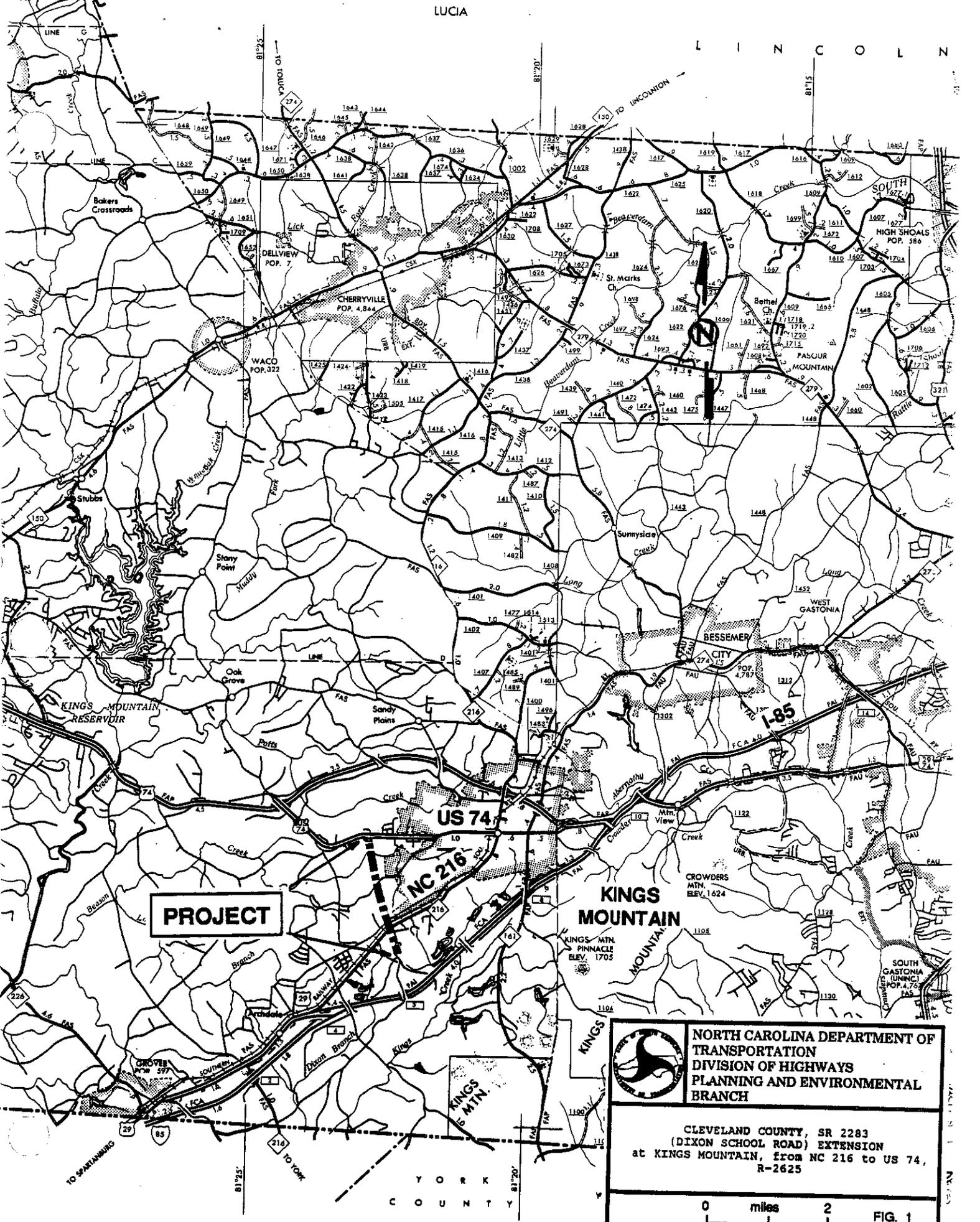
Possible negative impacts of the recommended project are: (1) a loss of pasture and woodlands; (2) increased noise levels for nearby development; and (3) relocation of 8 residences.

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

MH/plr

LUCIA

L I N C O L N



PROJECT



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

**CLEVELAND COUNTY, SR 2283
(DIXON SCHOOL ROAD) EXTENSION
at KINGS MOUNTAIN, from NC 216 to US 74,
R-2625**

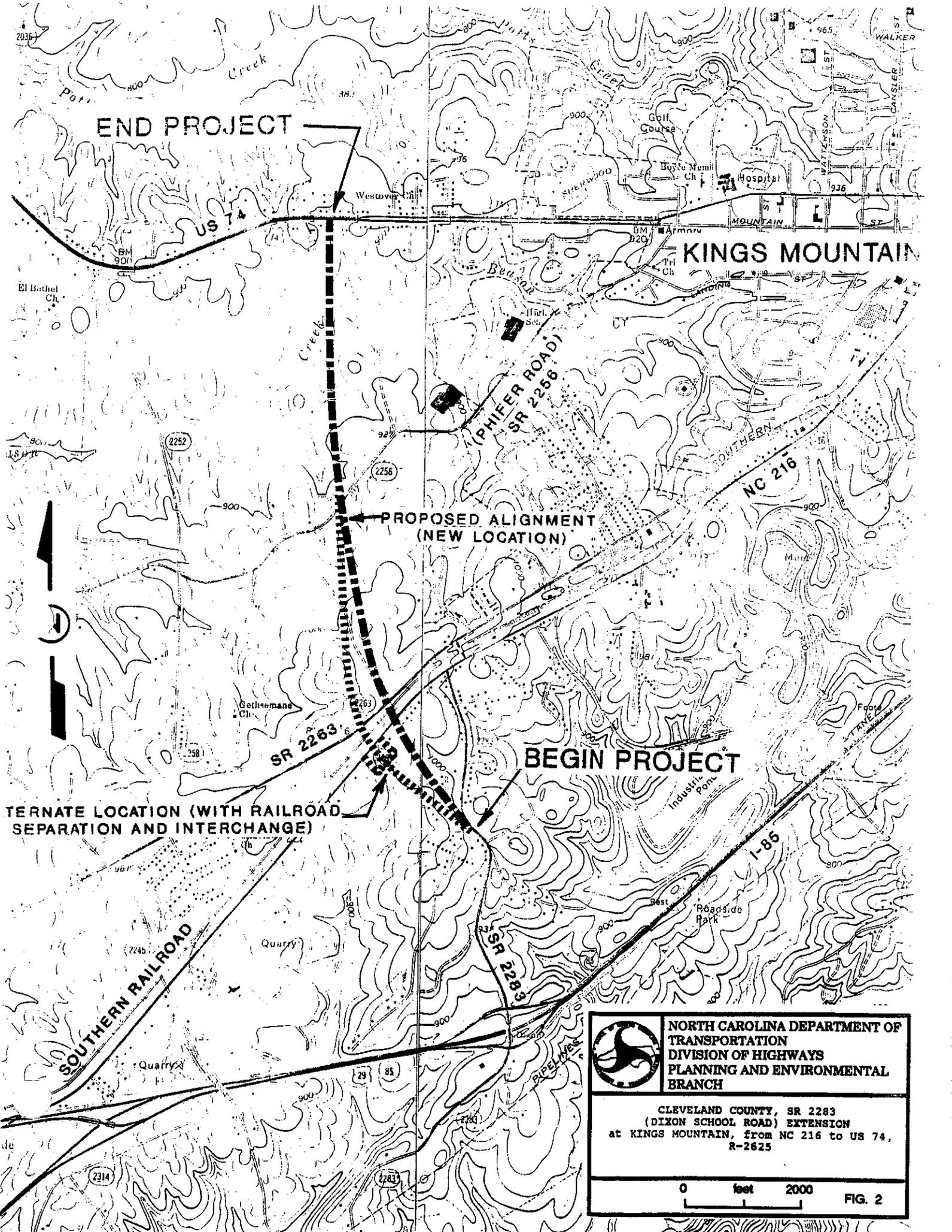


FIG. 1

I N A

S O U T H

Y O R K
C O U N T Y



END PROJECT

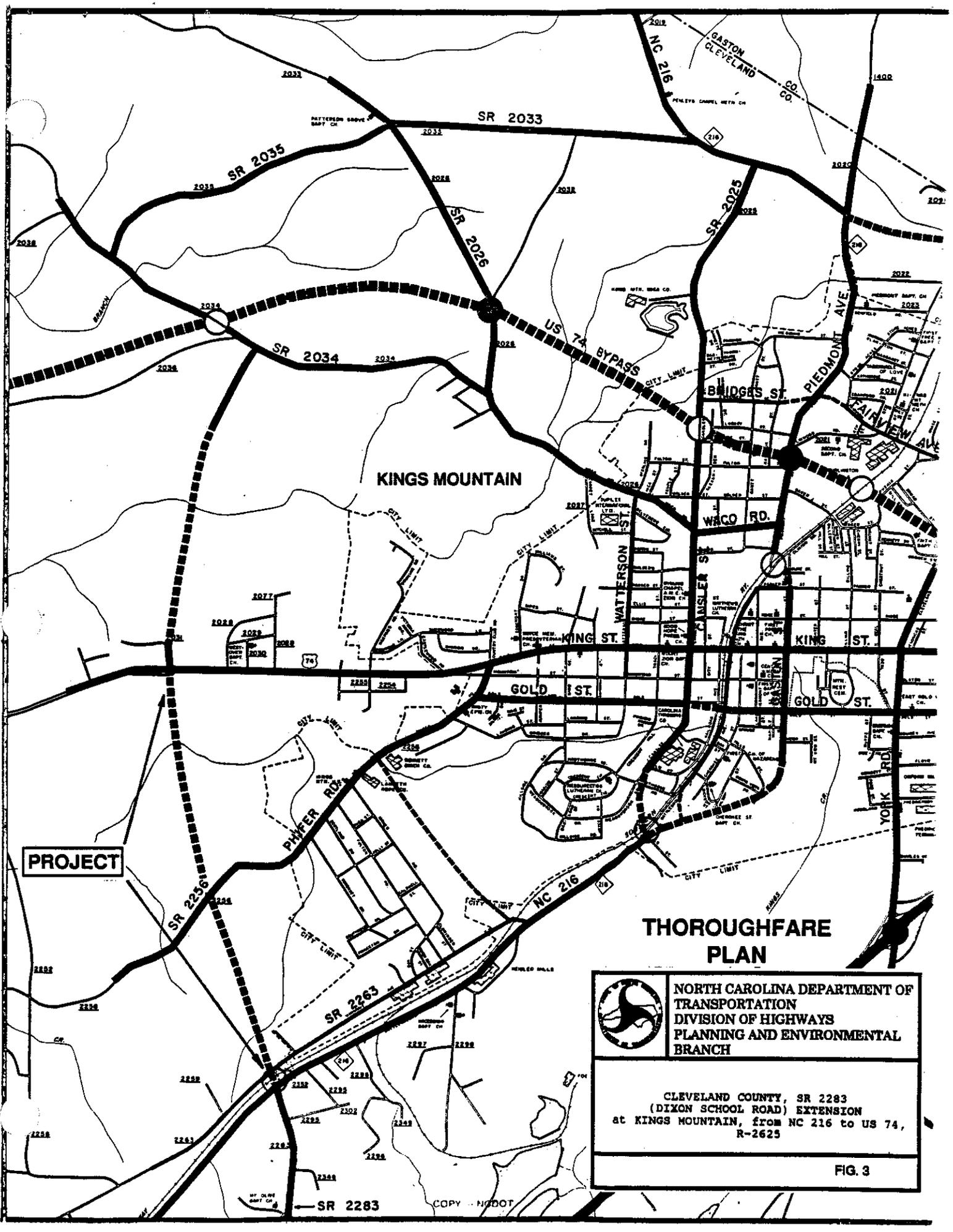
KINGS MOUNTAIN

PROPOSED ALIGNMENT
(NEW LOCATION)

BEGIN PROJECT

TERNATE LOCATION (WITH RAILROAD
SEPARATION AND INTERCHANGE)

	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANNING AND ENVIRONMENTAL BRANCH</p>
	<p>CLEVELAND COUNTY, SR 2283 (DIXON SCHOOL ROAD) EXTENSION at KINGS MOUNTAIN, from NC 216 to US 74, R-2625</p>
<p>0 feet 2000 FIG. 2</p>	



KINGS MOUNTAIN

**THOROUGHFARE
PLAN**

 NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL
BRANCH

CLEVELAND COUNTY, SR 2283
(DIXON SCHOOL ROAD) EXTENSION
at KINGS MOUNTAIN, from NC 216 to US 74,
R-2625

FIG. 3

PROJECT