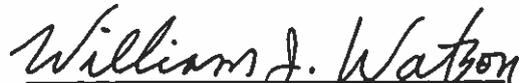
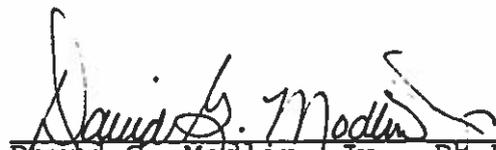


FEASIBILITY STUDY

Havelock
Lake Road (SR 1756)
And
Miller Boulevard (SR 1745 & SR 1763)
From
Proposed US 70 Bypass
To
US 70, Craven County
U-3431

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


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2/27/96
Date

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I. GENERAL DESCRIPTION

This preliminary study describes the proposed widening of Miller Boulevard (SR 1745 and SR 1763) and Lake Road (SR 1756) in Havelock. The project location is shown on Figure 1. The proposed cross-section for Miller Boulevard is a five-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs, with berms 8 feet (2.4 m) wide on each side, for a length of approximately 0.9 miles (1.4 km). The required right-of-way width for Miller Boulevard is 100 feet (30.5 m).

The proposed cross-section for Lake Road is a three-lane shoulder section, with a roadway pavement width of 36 feet (11.0 m), and shoulders 8 feet (2.4 m) wide, including 2 feet (0.6 m) full depth paved shoulders. The required right-of-way width for Lake Road is 80 feet (24.4 m).

The Miller Boulevard - Lake Road intersection (shown on Figure 2) will be revised as shown on Figure 3.

No residential or business relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be \$7,100,000.

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the needs, recommend a treatment including costs, and identify potential problem areas that require consideration in the planning and design phases.

II. NEED FOR PROJECT

The purpose of this project is to improve access between the Cherry Point Marine Corps Air Station, the Town of Havelock, and the proposed US 70 Bypass of Havelock.

Miller Boulevard is classified an Urban Minor Arterial and Lake Road is classified an Urban Collector in the North Carolina Statewide Functional Classification System. Both Miller Boulevard and Lake Road are Major Thoroughfares on the Havelock Thoroughfare Plan.

Land use along the project corridor is primarily residential with a mix of single family homes and apartments. There is a small amount of retail/commercial development, mainly near the north project terminal and the Miller Boulevard - Lake Road intersection.

Miller Boulevard is generally a two-way, two-lane road with grass shoulders approximately 6 feet (1.8 m) wide. The existing pavement is approximately 23 feet (7.0 m) wide. Lake Road is a two-way, two-lane road with grass shoulders, approximately 4 feet (1.2 m) wide. The existing pavement is approximately 21 feet (6.4 m) wide.

Traffic volume estimates for Miller Boulevard for the years 1995 and 2020 are 7,800 vehicles per day (vpd) and 12,100 vpd respectively. The Level of Service (LOS) without the proposed improvements, for Miller Boulevard, is estimated to be LOS D in 1995 and LOS E in 2020. With the proposed improvements the LOS is estimated to be LOS B in 1995 and LOS B in 2020.

Traffic volume estimates for Lake Road for the years 1995 and 2020 are 2,400 vehicles per day (vpd) and 7,800 vpd respectively. The Level of Service (LOS) without the proposed improvements, for Lake Road, is estimated to be LOS B in 1995 and LOS D in 2020. With the proposed improvements the LOS is estimated to be LOS B in 1995 and LOS C in 2020.

During the three year period beginning April 1, 1992, and ending March 31, 1995, there were 45 accidents reported on Miller Boulevard within the project limits. This resulted in a total accident rate of 381 accidents per 100 million vehicle miles (ACC/100MVM). This compares with the statewide average of 348 ACC/100MVM for all urban secondary routes, in North Carolina, for 1994.

There were no fatal accidents reported, but 18 accidents resulted in 36 injured persons. The most prevalent type accidents were Rear End (36%), Left Turn (27%), and Angle (18%).

The proposed wider cross-section with center turn-lane will reduce the potential for these type accidents.

On Lake Road within the project limits, and during the same three year period, there were 5 reported accidents. These resulted in a total accident rate of 154 accidents per 100 million vehicle miles (ACC/100MVM). This compares with

the statewide average of 348 ACC/100MVM for all urban secondary routes, in North Carolina, for 1994.

There were no fatal accidents reported, but 4 accidents resulted in 6 injured persons. Four of the five accidents involved vehicles running off the road.

The proposed wider cross-section with center turn-lane will reduce the potential for these type accidents.

III. RECOMMENDATIONS

It is recommended to widen Miller Boulevard (SR 1745 and SR 1763) and Lake Road (SR 1756) in Havelock. The project location is shown on Figure 1. The proposed cross-section for Miller Boulevard is a five-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs, with berms 8 feet (2.4 m) wide on each side, for a length of approximately 0.9 miles (1.4 km). The required right-of-way width for Miller Boulevard is 100 feet (30.5 m).

The proposed cross-section for Lake Road is a three-lane shoulder section, with a total pavement width of 40 feet (12.2 m), including paved shoulders 2 feet (0.6 m) wide, for a length of approximately 0.9 miles (1.4 km). The required right-of-way width for Lake Road is 80 feet (24.4 m).

The Miller Boulevard - Lake Road intersection (shown on Figure 2) will be revised as shown on Figure 3. These revisions will require the relocation of the existing railroad warning beacons and bells where the project crosses the Atlantic and East Carolina Railway, and the possible addition of automatic protective gates at this crossing. There are 2 trains per day at this crossing resulting in a design year Exposure Index of 24,200.

At the south project terminal the proposed cross-section will tie into the Y-line improvements under TIP Project R-1015 on Lake Road. At the north project terminal the proposed cross section will tie into the existing short curb and gutter section on Miller Boulevard at the US 70 intersection.

No residential or business relocations are anticipated due to this project.

The total cost, including construction and right-of-way, is estimated to be \$7,100,000 as follows:

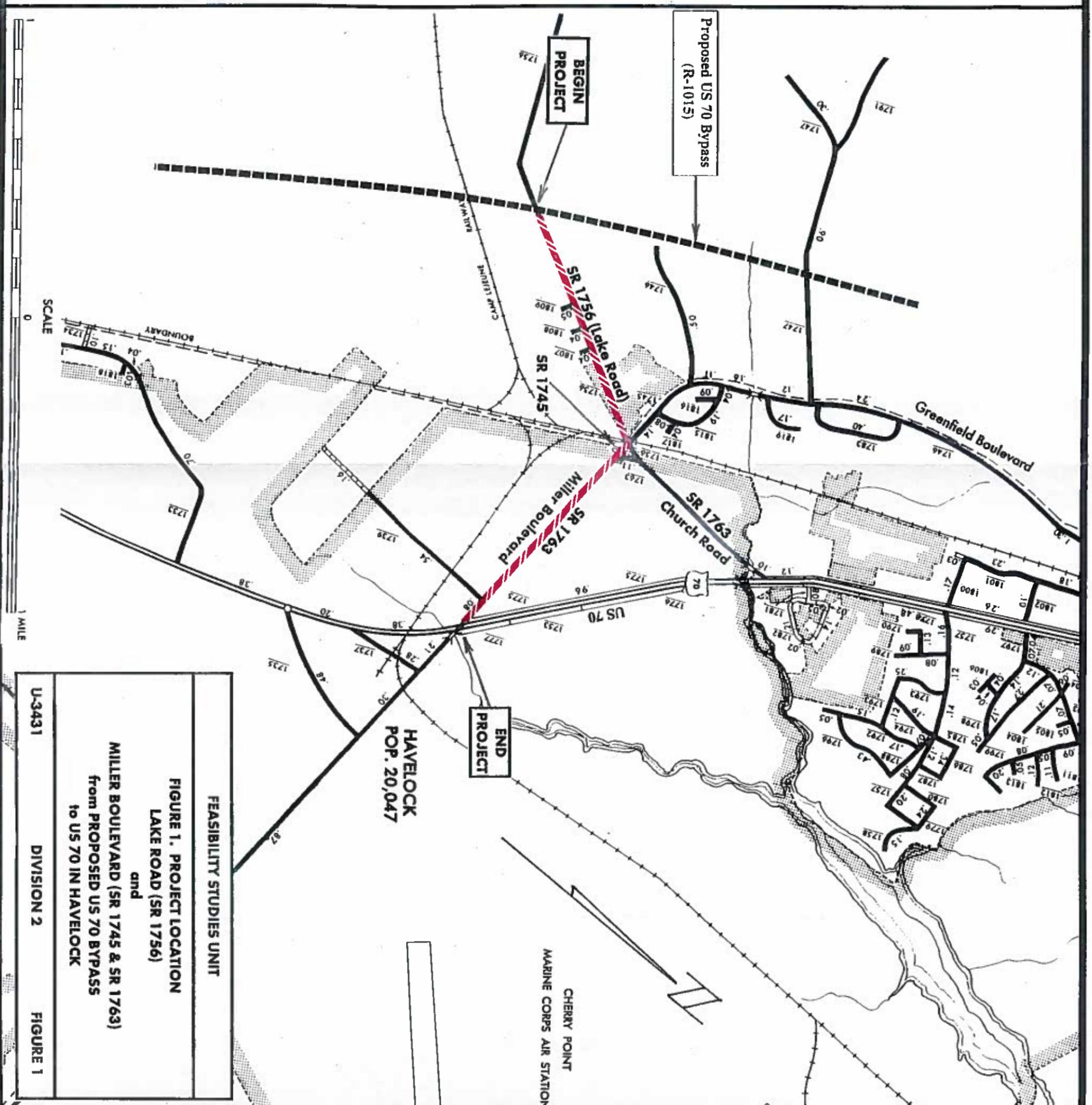
Construction.....	\$4,100,000
Right-of-Way.....	<u>3,000,000</u>
Total Cost.....	\$7,100,000

IV. OTHER COMMENTS

An environmental screening was not conducted for this study. This project is not expected to involve any wetlands. No historic properties or endangered species are anticipated.

For Lake Road, cost estimates for several alternative cross-sections were made as follows:

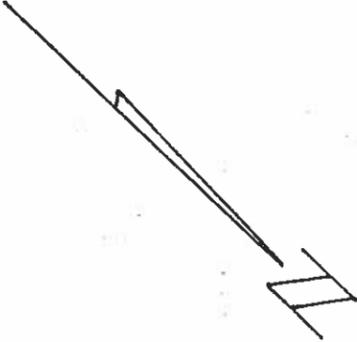
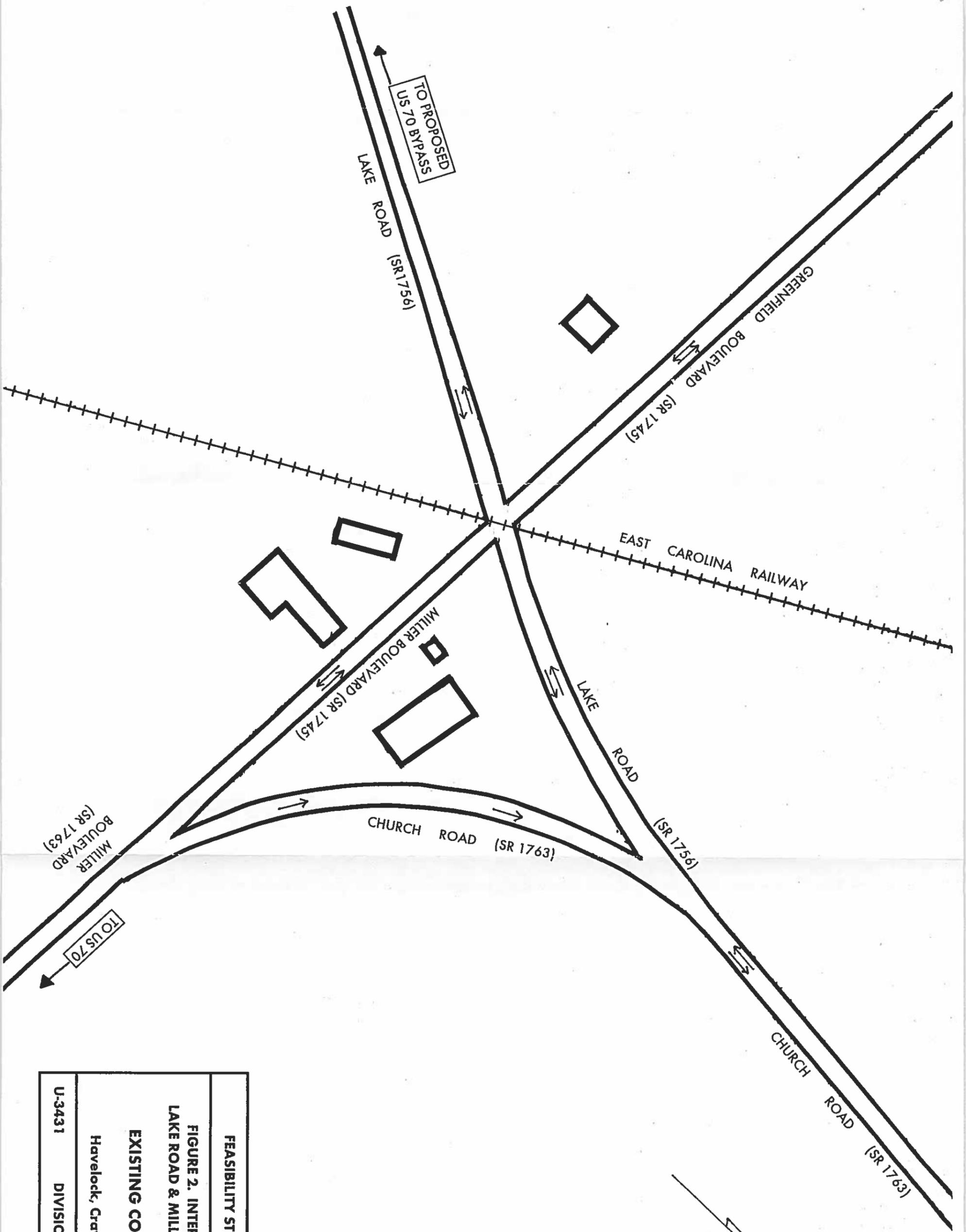
1. Two lane shoulder section with paved shoulders on right-of-way 80 feet (24.4 m) wide.
Construction cost: \$900,000.00
2. Three lane shoulder section with paved shoulders on right-of-way 80 feet (24.4 m) wide. (Recommended)
Construction cost: \$1,200,000.00
3. Three lane curb and gutter section on right-of-way 80 feet (24.4 m) wide.
Construction cost: \$1,300,000.00
4. Four lane curb and gutter section on right-of-way 80 feet (24.4 m) wide.
Construction cost: \$1,900,000.00
5. Five lane curb and gutter section on right-of-way 90 feet (24.4 m) wide.
Construction cost: \$2,500,000.00



FEASIBILITY STUDIES UNIT

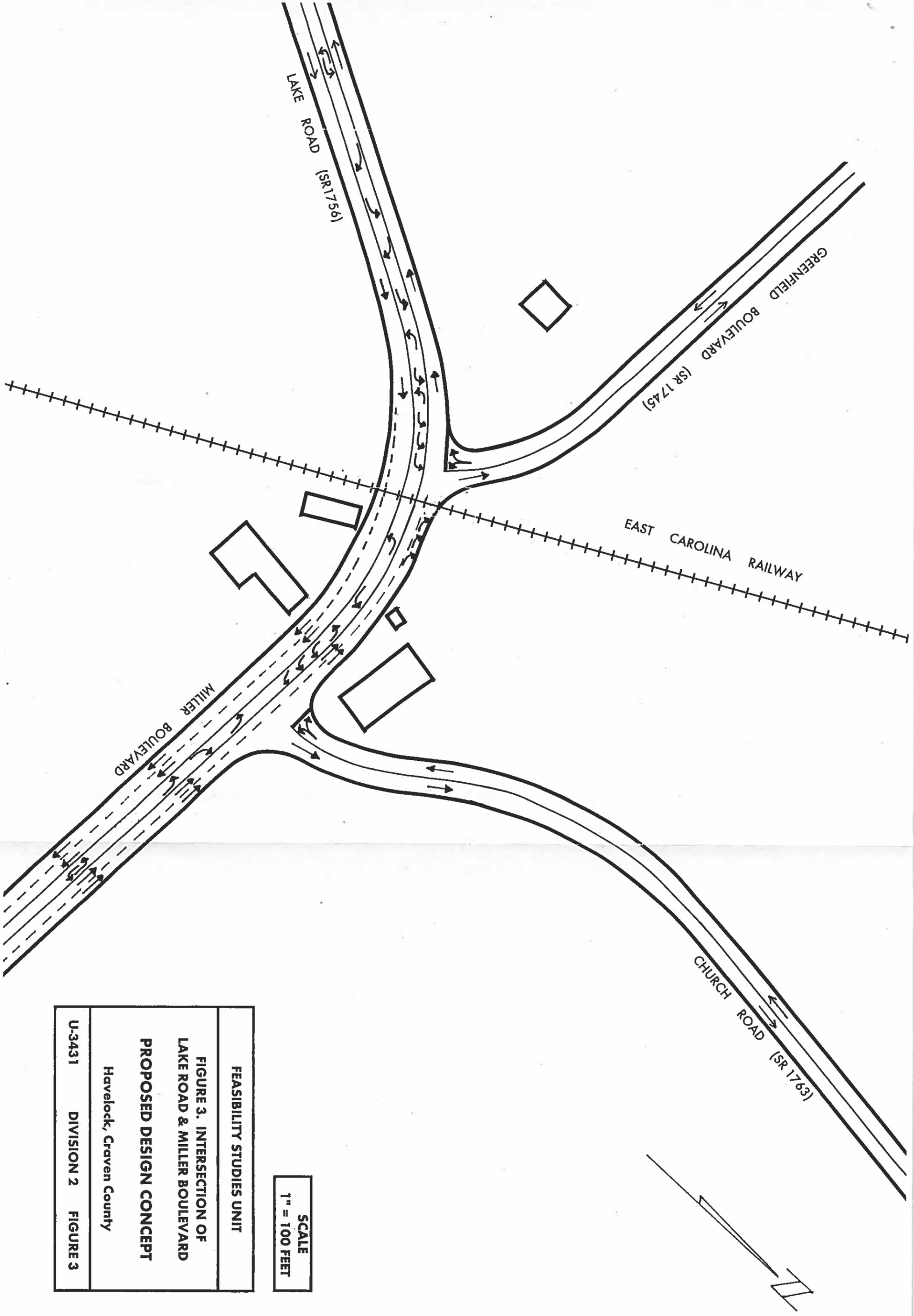
FIGURE 1. PROJECT LOCATION
LAKE ROAD (SR 1756)
and
MILLER BOULEVARD (SR 1745 & SR 1763)
from PROPOSED US 70 BYPASS
to US 70 IN HAVLOCK

U-3431 DIVISION 2 **FIGURE 1**



SCALE
1" = 100 FEET

FEASIBILITY STUDIES UNIT		
FIGURE 2. INTERSECTION OF LAKE ROAD & MILLER BOULEVARD		
EXISTING CONDITIONS		
Havelock, Craven County		
U-3431	DIVISION 2	FIGURE 2



SCALE
1" = 100 FEET

FEASIBILITY STUDIES UNIT		
FIGURE 3. INTERSECTION OF LAKE ROAD & MILLER BOULEVARD		
PROPOSED DESIGN CONCEPT		
Havelock, Craven County		
U-3431	DIVISION 2	FIGURE 3