

FEASIBILITY STUDY

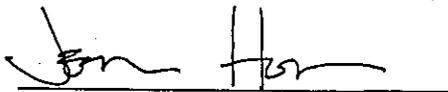
Louisburg

**US 401/NC 39 (Bickett Boulevard)
from NC 56/581 (Nash Street)
to SR 1229 (Main Street)
Franklin County**

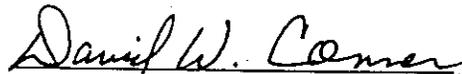
Division 5

R-3608

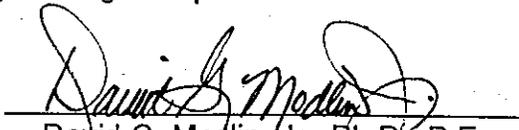
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R-3608

Louisburg
US 401/NC 39 (Bickett Boulevard)
From NC 56/581 (Nash Street)
To SR 1229 (Main Street)
Franklin County

Division 5

I. General Description

This preliminary study describes recommended improvements to US 401/NC 39 (Bickett Boulevard) in Louisburg. It is recommended that US 401/NC 39 be widened from NC 56/581 (Nash Street) to SR 1229 (Main Street), a distance of approximately 1.3 miles (2.1 km). For a location map, please see Figure 1.

The recommended cross section is a 64-foot (19.5-m) wide (face-to-face), curb-and-gutter section with two travel lanes in each direction, a center turn lane, and 10-foot (3.0-m) wide berms for the total project length.

The widening should retain and utilize the existing alignment to the extent possible and will be generally symmetrical to the centerline of the existing roadway. The widening should be accomplished within the existing 100-foot (30.5-m) wide right-of-way.

It is estimated that there will be no residences or businesses relocated as a result of this project.

The total cost for right-of-way (utility adjustments) and construction is estimated to be \$4,700,000 as follows:

Utility Adjustments	\$ 500,000
Construction	<u>4,200,000</u>
Total Cost	\$ 4,700,000

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

II. Need For Project

The purpose of this project is to improve the traffic carrying capacity and accident experience of US 401/NC 39 in Louisburg. The project was requested by the Town of Louisburg.

US 401/NC 39 is designated a major thoroughfare on the Louisburg Thoroughfare Plan. It is designated as a minor arterial on the North Carolina Statewide Functional Classification System.

Development on US 401/NC 39, along the project route, is generally commercial with high concentrations around the NC 56/581 intersection and the NC 561 intersection. At the northern project terminal, there is a hospital located on the west side of the roadway and a funeral home on the east side.

At the southern project terminal, the intersection with NC 56/581 is signalized. The northbound approach (US 401/NC 39) to the intersection is a 5-lane, 64-foot (19.5-m) wide (face-to-face) curb-and-gutter facility. The southbound approach is 3-lane curb-and-gutter and includes a through-right lane, a left-through lane, and 1 lane exiting the intersection. Existing NC 56/581 is a 4-lane, undivided, shoulder-ditch section on the east side of the intersection, and a 3-lane curb-and-gutter section on the west side.

From NC 56/581 north approximately 0.2 miles (0.3 km), the existing roadway cross section is 3-lane curb-and-gutter. At this point, the roadway tapers to a 2-lane rural shoulder section with a 24-foot (7.3-m) wide pavement and soil shoulders. This cross section continues north past the north project terminal except at the approaches to the intersection with NC 561. At the intersection, US 401/NC 39 approaches are widened to facilitate turning movements. The intersection is signalized and, at the intersection, NC 561 is a 3-lane section, channelized with traffic islands.

At the northern project terminal, SR 1229 terminates as a T intersection with US 401/NC 39.

The 1996 Average Daily Traffic (ADT), within the project limits, is estimated to range from approximately 16,000 vehicles per day (vpd) near NC 56/581 to approximately 10,200 vpd near SR 1229. The design year (2020) estimates are 26,300 vpd and 16,700 vpd respectively.

The current estimated Level Of Service (LOS) is Level E near NC 56/581 and Level D near SR 1229. Without improvements, it is estimated that the Level of Service will deteriorate to Levels E and F prior to the design year. With the recommended improvements, the Level of Service is expected to improve to a Levels A and B and which should prevail through the design year.

During the period from March 1, 1993, through February 29, 1996, there were 56 accidents reported on US 401/NC 39 between NC 56/581 and SR 1229. This resulted in an accident rate of 307 accidents per 100 million vehicle miles (Acc/100MVM), compared to a statewide average of 317 Acc/100 MVM for all urban NC routes during 1994. There were no fatalities reported during the period, but 26 of the accidents resulted in injuries. The most prevalent accident types were rear-end (44.7%), left turn (23.2%), and angle (19.6%). The wider cross section with center turn lane will reduce the potential for these types of accidents.

III. Recommendations

It is recommended that US 401/NC 39 be widened from NC 56/581 (Nash Street) to SR 1229 (Main Street), a distance of approximately 1.3 miles (2.1 km). For a location map, please see Figure 1.

The recommended cross section is a 64-foot (19.5-m) wide (face-to-face), curb-and-gutter section with two travel lanes in each direction, a center turn lane, and 10-foot (3.0-m) wide berms for the total project length.

The widening should retain and utilize the existing alignment to the extent possible and will be generally symmetrical to the centerline of the existing roadway. The widening should be accomplished within the existing 100-foot (30.5-m) wide right-of-way.

Traffic signal modifications will be required at NC 56/581 and NC 561 (Justice Street).

It is estimated that there will be no residences or businesses relocated as a result of this project.

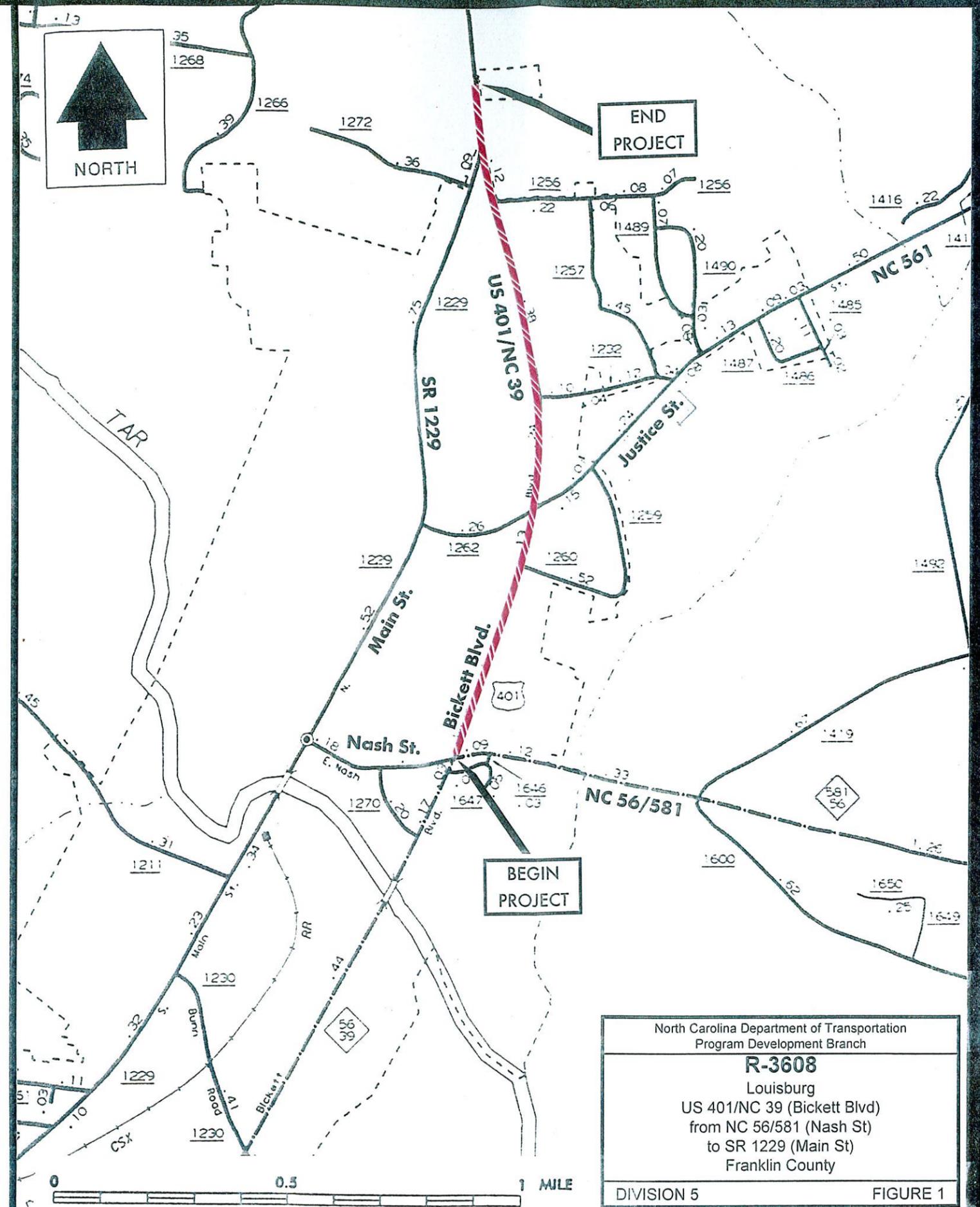
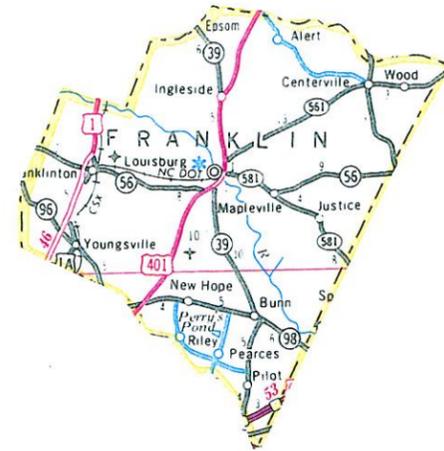
The total cost for right-of-way (utility adjustments) and construction is estimated to be \$4,700,000 as follows:

Utility Adjustments	\$ 500,000
Construction	<u>4,200,000</u>
Total Cost	\$ 4,700,000

IV. Other Comments

An environmental screening was not conducted for this study; however, no wetlands or historic properties were identified.

No provisions for bicycles have been included in this report.



North Carolina Department of Transportation
 Program Development Branch

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DIVISION 5 FIGURE 1