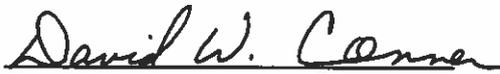


**FEASIBILITY STUDY**

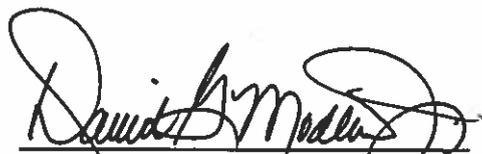
**Burlington  
Mebane Street (SR 1306 and SR 1363)  
From Huffman Mill Road (SR 1158) To Chapel Hill Road (NC 54)  
Alamance County**

**U-3303**

Prepared by  
Program Development Branch  
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Date

## **U-3303**

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Mebane Street (SR 1306 and SR 1363)  
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### **I. General Description**

This preliminary study describes recommended improvements to Mebane Street (SR 1306 and SR 1363) in Burlington. It is recommended that Mebane Street be widened from Huffman Mill Road (SR 1158) to Chapel Hill Road (NC 54). The total project length is 2.4 miles (3.8 km). For a location map, please see Figure 1.

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 8-foot (2.4-m) wide berms is recommended for the entire project length on a 100-foot (30.5-m) wide right of way.

The widening will retain and utilize the existing alignment to the extent possible and will be generally symmetrical to the centerline of the existing roadway.

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 and construction is estimated to be \$6,700,000.

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 Mebane Street in Burlington. The project was requested by the Alamance County Transportation Advisory Committee and has been endorsed by the City of Burlington.

Mebane Street is designated a major thoroughfare on the Alamance County Urban Area Thoroughfare Plan. It is not classified at this time in the North Carolina Statewide Functional Classification System.

Development on Mebane Street is generally dense residential development with commercial development concentrated around the intersections. There is a major shopping center located at the western project terminal and a new school is being constructed on Cardwell Drive adjacent to Mebane Street.

From Huffman Mill Road to Alamance Road, Mebane Street is generally a 2-lane, 2-way roadway with a 22-foot (6.7-m) wide pavement and 4-foot (1.2-m) wide soil shoulders. From Alamance Road to Chapel Hill Road, Mebane Street is generally a 2-lane, 2-way roadway with a 20-foot (6.1-m) wide pavement and 4-foot (1.2-m) wide soil shoulders.

At the western project terminal, Mebane Street terminates at a T intersection with Huffman Mill Road. The Mebane Street leg of the intersection has been widened to include a combination right-turn/through lane (the through lane is into a shopping center), a left-turn lane, and one lane exiting the intersection. The Huffman Mill Road approaches include a combination right-turn/through lane, a through lane, a left-turn lane, and two lanes exiting the intersection. The intersection is signalized.

At the eastern project terminal, the intersection with Chapel Hill Road is signalized. The northbound approach of Mebane Street has been widened to include a combination through/right-turn lane, a left-turn lane, and one lane exiting the intersection. On the north side of Chapel Hill Road, Mebane Street is a 48-foot (14.6-m) wide (face-to-face) curb-and-gutter facility. Existing Chapel Hill Road is a 2-lane roadway which is scheduled for widening, to a 5-lane curb-and-gutter facility, as part of U-2907.

The intersection with Alamance Road is also signalized. Alamance Road is presently a 2-lane shoulder section. It is scheduled for widening to a 5-lane, curb-and-gutter facility as part of U-2906. At this intersection, all approaches have been widened to include a left-turn lane.

The 1994 Average Daily Traffic (ADT) on Mebane Street is estimated to be 13,000 vehicles per day (vpd). The design year (2020) volume on Mebane Street is estimated to be 24,600 vpd.

The Level Of Service (LOS) is currently estimated to be a level E on Mebane Street. With the recommended improvements the LOS is expected to improve to a level B and should reach a level C by the design year (2020). Without these improvements it is estimated that a level F will be reached prior to the design year.

During the period from April 1, 1991, through March 31, 1994, there were 139 accidents reported on Mebane Street between Huffman Mill Road and Chapel Hill Road. This resulted in an accident rate of 516.0 accidents per 100 million vehicle miles (Acc/100MVM), compared to a statewide average of 311.1 Acc/100 MVM for all urban secondary routes during 1993. There were no fatalities reported during the period, but 62 of the accidents resulted in injuries. The most prevalent accident types were rear-end (52%), left turn (35%), and angle (20.0%). The wider cross section with center turn lane will reduce the potential for these types of accidents.

### **III. Recommendations**

It is recommended that Mebane Street be widened from Huffman Mill Road (SR 1158) to Chapel Hill Road (NC 54). The total project length is 2.4 miles (3.8 km). For a location map, please see Figure 1.

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 8-foot (2.4-m) wide berms is recommended for the entire project length on a 100-foot (30.5-m) wide right of way.

Traffic signal modifications will be required at Huffman Mill Road, Alamance Road (NC 62), and Chapel Hill Road.

The widening will retain and utilize the existing alignment to the extent possible and will be generally symmetrical to the centerline of the existing roadway.

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

The estimated cost for these improvements, including right-of-way and construction is \$6,700,000 as follows:

Right-of-Way	.....	\$2,900,000
Construction	.....	3,800,000
Total Cost	.....	\$6,700,000

#### **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.

