

FEASIBILITY STUDY

**Morganton
Stonebridge Drive Extension
from NC 18 (S. Sterling St.) to US 70 Bypass (Fleming Dr.)
Burke County
U-3446**



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

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Eric J. Lamb

Feasibility Studies Engineer

A handwritten signature in black ink, appearing to read "David G. Modlin, Jr.", written over a horizontal line.

David G. Modlin, Jr., Ph.D., P.E.

Head of Feasibility Studies

2/28/96

Date

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I. General Description

This feasibility study describes improvements to Stonebridge Drive from NC 18 (S. Sterling St.) to US 70 (Fleming Dr.), a distance of 1.1 miles (1.8 km). The project location is shown on Figure 1. It is recommended to construct the Stonebridge Drive Extension from NC 18 to SR 1704 (Bethel Rd.) and to improve existing Stonebridge Drive from SR 1704 to US 70. The recommended cross-section is a five-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs with 8-foot (2.4-m) berms, on 100 feet (30.5 m) of right-of-way. It is anticipated that there will be no residences and one business relocated due to this project. The total cost of the project, including construction and right-of-way, is estimated to be \$4,200,000.

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 proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

II. Need for Project

The purpose of this project is to provide an intermediate loop system between NC 18 and US 70 on the east side of Morganton. This project is supported by Burke County, the City of Morganton, the Hickory Metropolitan Planning Organization, the Burke County Chamber of Commerce, the Burke County Commissioners, and the Burke County Economic Development Council.

Stonebridge Drive is designated as a proposed major thoroughfare in the Morganton Thoroughfare Plan.

From US 70 to SR 1704 (Bethel Rd.), Stonebridge Drive is currently a two-lane, two-way roadway with a pavement width of 22 feet (6.7 m) and soil shoulders 12 feet (3.7 m) wide on an 80-foot (24.4 m) right-of-way. There are several small businesses located near the intersection with US 70. South of the intersection of SR 1704 is Bethel Road Park. On the eastern edge of this park is an established 80-foot (24.4-m) right-of-way corridor for this project.

Between Bethel Road Park and NC 18, there is very little development. There is currently a proposal to develop this property for commercial use, which may include multi-family residential units, office space and a large shopping center.

TIP Project U-2550 will improve NC 18 to a five-lane curb and gutter facility. This project is scheduled for right-of-way acquisition in FY1996 and construction in FY1997.

The 1994 Average Daily Traffic (ADT) along completed Stonebridge Drive would vary from 7,100 to 7,800 vehicles per day (vpd). For the design year 2020, the projected traffic volume on completed Stonebridge Drive will range between 17,400 and 19,000 vpd. Truck traffic is estimated to make up 5% of daily traffic.

If the Stonebridge Drive Extension is constructed as a four or five-lane curb and gutter section throughout the project, this facility will operate at Level of Service (LOS) B in the current year and at LOS C in the design year 2020.

III. Recommendations

It is recommended to construct the Stonebridge Drive Extension from NC 18 (S. Sterling St.) to SR 1704 (Bethel Rd.) and to improve existing Stonebridge Drive from SR 1704 to US 70 (Fleming Dr.). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs with 8-foot (2.4-m) berms, on 100 feet (30.5 m) of right-of-way. It is recommended to align the southern terminus at NC 18 with the intersection of Sloan Avenue and Moose Street (see inset, Figure 1).

It is recommended to install new signals at the intersections with NC 18, SR 1704 and US 70. A right-turn lane will be required from NC 18 onto the Stonebridge Drive Extension. A left-turn lane from SR 1704 onto southbound Stonebridge Drive Extension will also be required.

It is anticipated that no residences and one business will be relocated due to the project. The total cost is as follows:

Construction.....	\$ 3,300,000
Right-of-way.....	\$ 900,000
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Total Cost	\$ 4,200,000

IV. Alternates

A four-lane divided curb and gutter section was considered from NC 18 to SR 1704. This cross-section would consist of 12-foot (3.7-m) travel lanes, an 18-foot (5.5-m) raised median, and 8-foot (2.4-m) berms. This alternative would also be constructed on 100 feet (30.5 m) of right-of-way. The total cost of this option is as follows:

Construction.....	\$ 3,500,000
Right-of-way.....	\$ 900,000
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Total Cost	\$ 4,400,000

If the Stonebridge Drive Extension is constructed as a four or five-lane section from SR 1704 to NC 18 with no improvements to the existing two lane section, the Level of Service will vary from LOS C on the five-lane section to LOS E on the existing section in the design year 2020. The cost of widening existing Stonebridge Drive to a five-lane curb and gutter section from SR 1704 to US 70 is \$965,000, including construction and right-of-way. This cost is included in the above estimates.

V. Other Comments

An environmental screening was not conducted for this study. However, no impacts to historic properties or wetlands are anticipated.

Based on maps at the Department of Environment, Health & Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.

All waterways within the project corridor are classified WS-IV and are part of the Catawba River Basin.

No special accommodation for bicycles is recommended on this project.

