

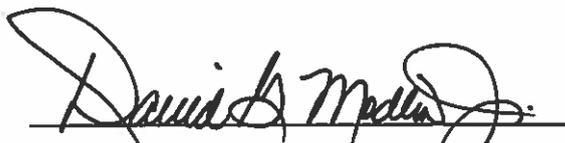
FEASIBILITY STUDY

Lexington
New Connector
From I-85 Business to NC 8
Davidson County
U-2545
(Revised)

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



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Date

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I. GENERAL DESCRIPTION

This preliminary study describes a proposed road on new location connecting I-85 Business and NC 8. The proposed road extends from I-85 Business at Green Needles Road (SR 1297) through Brown Street (SR 1254) and Linwood Road (SR 1104), and connects to Albemarle Street. Please see Figure 1 for project location. A two-lane shoulder section, 24 feet (7.3 m) of pavement with 8-foot (2.4-m) shoulders including 4-foot (1.2-m) paved shoulders, is recommended on 100 feet (30.5 m) of right of way for the entire length. The approximate length of the project is 2.57 miles (4.1 km).

The total estimated cost for the project including construction and right of way is \$5,700,000. It is estimated that there will be 7 residences and no businesses relocated due to this project.

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 problem, recommend a treatment including costs, and identify potential problem areas that require consideration in the planning and design phases.

II. NEED FOR PROJECT

This project was requested by the City of Lexington. The purpose of the project is to provide an east-west crosstown link for the City of Lexington. A similar crosstown connector was originally studied in 1990 and has been a top priority for the City of Lexington for several years. The Lexington Thoroughfare Plan currently depicts the alternate recommended in this report.

The proposed road crosses Brown Street and Linwood Road and connects to Green Needles Road on the east end and Albemarle Street on the west end. Brown Street is classified as a collector and Linwood Road as a minor arterial on the North Carolina Functional Classification System.

Brown Street feeds into a furniture manufacturing plant on the west end and into NC 8 on the east end. Across NC 8 lies a large shopping center with several businesses in

the surrounding area. The majority of development on Brown Street is residential. Traffic on Brown Street is a mixture of passenger car and large truck traffic due to the manufacturing plants. Development on Linwood Road is mostly residential and farming.

A new east-west connector will benefit both the large number of shoppers and residents in the area and provide the large plants with a more convenient outlet for shipping and receiving.

The proposed road crosses the Southern Railway in the western portion of the area. Approximately 28 trains per day cross these tracks at speeds up to 79 miles per hour. A grade separation will carry vehicles safely over the Southern Railway.

The Winston-Salem Southbound Railway passes through the eastern portion of the project area paralleling NC 8. The studied alignment utilizes the existing structure on Albemarle Street over the Winston-Salem Southbound Railway. This structure is 30 feet (9.1 m) wide and has a sufficiency rating of 84.6.

In addition to the grade separation for Southern Railway, a new bridge is necessary to cross Swearing Creek, which lies east of the Southern Railway.

Average Daily Traffic (ADT) on Brown Street is currently 2800 vehicles per day. This is projected to increase to 8700 vehicles per day by the year 2020. A significant portion of these vehicles will be large trucks due to the current and future industrial developments in the area.

The studied road is estimated to operate at a Level of Service (LOS) B based on the 1994 peak traffic hour. A LOS D will prevail through the 2020 design year.

III. RECOMMENDATIONS AND COSTS

It is recommended that a road on new location be constructed to connect I-85 Business to NC 8. The recommended improvement is a two-lane roadway extending from Green Needles Road (SR 1297) to Albemarle Street. The cross section of the studied road is a 24-foot (7.3-m) section with 8-foot (2.4-m) shoulders, including 4-foot (1.2-m) paved shoulders. A 100-foot (30.5-m) right of way is proposed. The wide right of way is proposed to allow for future widening. Two structures will be required. One is needed to cross Southern Railway. A second bridge is required to cross Swearing Creek.

It is estimated that there will be 7 residences and no businesses relocated due to this project.

The total estimated cost of this project is as follows:

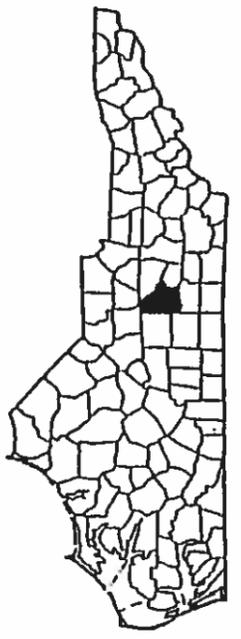
CONSTRUCTION	\$ 4,300,000
RIGHT OF WAY	1,400,000
TOTAL	\$ <u>5,700,000</u>

IV. OTHER COMMENTS

A prior Feasibility Study was completed in 1990 studying the possibility of a connector between I-85 Business and NC 8. The previous recommendation extended from Green Needles Road along the same path as the current recommendation but ended at Brown Street. This proposal served merely as an extension of Brown Street.

According to the old recommendation, traffic would continue through Brown Street, which is largely residential, and cross an at-grade railroad crossing near the NC 8 intersection. The at-grade crossing near NC 8 is undesirable because of the possible danger associated with an increase in traffic. Also, because of the proximity of houses on Brown Street, it would be difficult to widen beyond a 3-lane section. By constructing a roadway on new location, traffic can be routed to Albemarle Street where a grade separation of the Winston-Salem Southbound Railway exists.

An environmental screening was not conducted for this revised study.



FEASIBILITY STUDIES UNIT

LEXINGTON

**BROWN STREET EXTENSION
FROM I-85 BUSINESS TO NC 8**

DAVIDSON CO. DIV. 9 U-2545

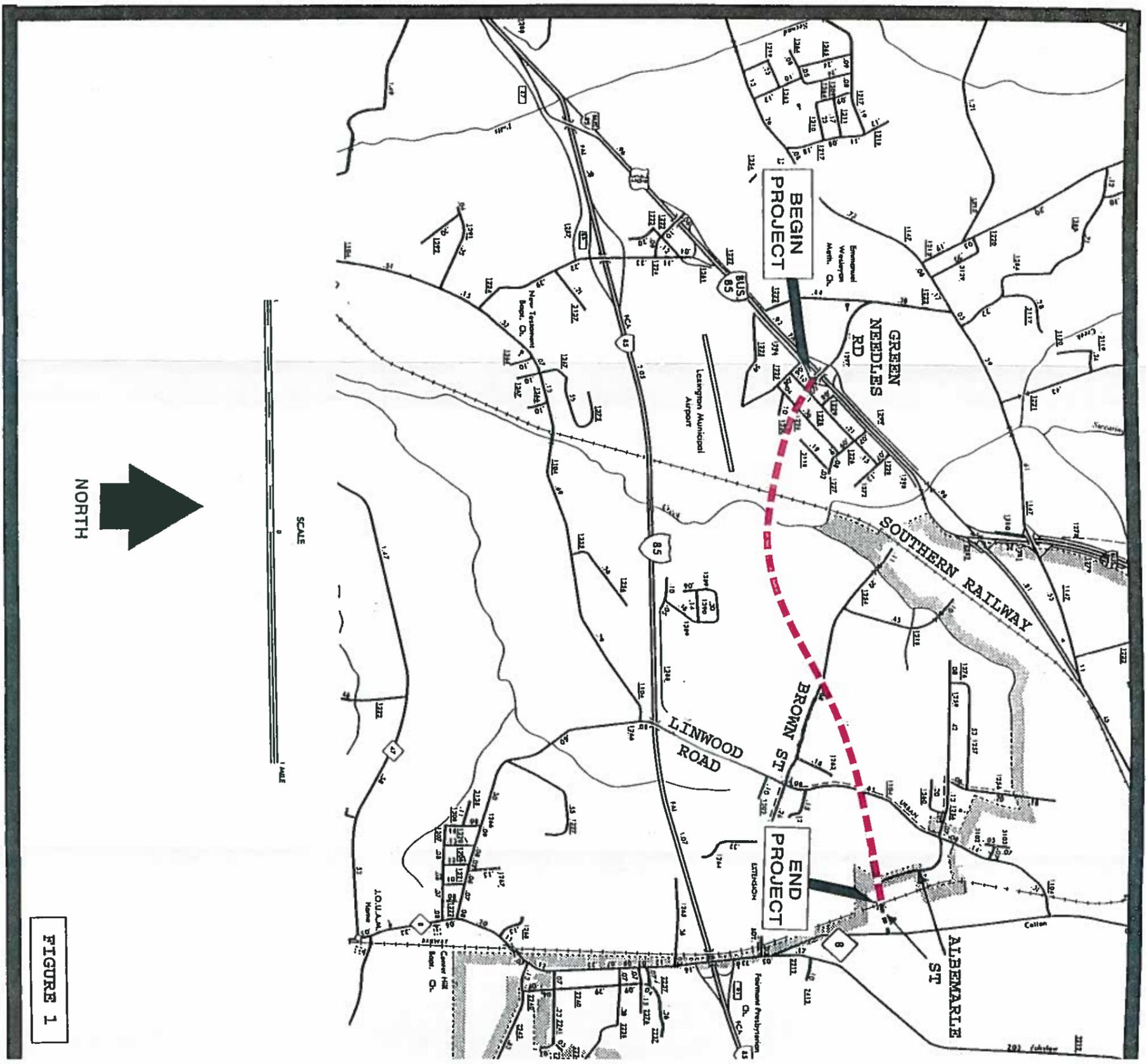


FIGURE 1

