

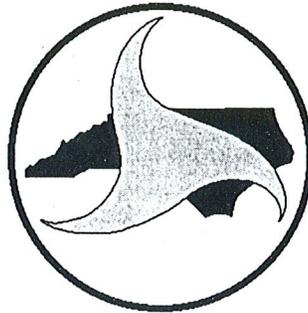
**FEASIBILITY STUDY**

**Greensboro**

**SR 1424 (Hilltop Rd.)  
from SR 1546 (Guilford College Rd.)  
to SR 1575 (Stanley Rd.)  
Guilford County**

**Division 7**

**U-3612**



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

A handwritten signature in black ink, appearing to read "Eric J. Lamb", written over a horizontal line.

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

3/3/97

Date

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SR 1424 (Hilltop Rd.)  
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## **I. General Description**

This feasibility study describes widening SR 1424 (Hilltop Rd.) from SR 1546 (Guilford College Rd.) to SR 1575 (Stanley Rd.), a distance of 2.1 miles (3.4 km). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section, varying between 64 feet (19.5 m) and 68 feet (20.7 m) wide from face-to-face of curbs. The recommended right-of-way varies between 100 feet (30.5 m) and 120 feet (36.6 m) with no access control. It is anticipated that there will be two residences and no businesses relocated due to this project. The total cost of the project, including construction and right-of-way, is estimated to be \$8,800,000.

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 relieve congestion within the project limits. This project is supported by the Greensboro City Council and by the Greensboro Transportation Advisory Committee (TAC).

SR 1424 is designated as a major thoroughfare in the Greensboro Urban Area Thoroughfare Plan and as a minor urban arterial in the North Carolina Statewide Functional Classification System.

Development along the project is a combination of single family and multifamily residences. Several churches and subdivisions have access from SR 1424. There is also a small private golf course adjacent to the project, located west of the Adams Farm Parkway.

SR 1424 is currently a two-lane roadway with a pavement width of 24 feet (7.3 m) and soil shoulders. West of SR 1546 (Guilford College Rd.), the roadway has recently been extended as the Piedmont Parkway, which is a four-

lane divided curb and gutter facility. East of SR 1575 (Stanley Rd.), SR 1424 becomes a four-lane undivided curb and gutter section.

There are existing traffic signals at the intersections with SR 1546 (Guilford College Rd.), the Bridford Parkway and SR 1575 (Stanley Rd.)

TIP Project U-2524AC will construct the western portion of the Greensboro Outer Loop, which in the vicinity of the project will be an eight-lane freeway. It will cross this project east of SR 1575 with a grade separation. It is scheduled for right-of-way acquisition in October 2003 and for post-year construction.

TIP Project U-2913B will widen SR 1546 (Guilford College Rd.) to a multilane facility. It is scheduled for right-of-way acquisition in December 1999 and for construction in June 2001.

East of the Adams Farm Parkway, SR 1424 is part of a bicycle route under TIP Project E-3409. This would become part of a regional bicycle route and is scheduled to be in place in FY 1999.

The 1996 Average Daily Traffic (ADT) along SR 1424 varies from 9,400 to 12,700 vehicles per day (vpd). For the design year 2020, the estimated traffic volumes on SR 1424 will range between 17,800 and 24,400 vpd. Truck traffic is estimated to make up 3% of daily traffic.

Currently SR 1424 is operating at Level of Service (LOS) D. If no improvements are made, it is projected that the roadway will operate at LOS F in the design year 2020. If SR 1424 is widened to a five-lane curb and gutter section, the facility will operate at LOS A in the current year and at LOS B in the design year 2020.

During the three-year period from May 1993 to April 1996, there were 79 accidents reported on SR 1424 within the project limits. There were 48 injuries reported as a result of these accidents, including no fatalities. The accident rate along SR 1424 within the project limits is 407.22 accidents per 100 million vehicle miles (acc/100mvm). This compares with the 1994 statewide rate of 340.50 acc/100mvm for two-lane urban secondary routes.

### **III. Recommendations**

It is recommended to widen SR 1424 (Hilltop Rd.) from SR 1546 (Guilford College Rd.) to SR 1575 (Stanley Rd.), a distance of 2.1 miles (3.4 km). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section on varying right-of-way with no access control.

The project can be broken down into three segments, as shown in Figure 1.

Segment 1 - from SR 1546 (Guilford College Rd.) to the Adams Farm Parkway (0.8 miles)

It is recommended to widen this portion of the project to a five lane curb and gutter section 64 feet (19.5 m) wide from face-to-face of curbs with 10-foot (3.0-m) berms on 100 feet (30.5 m) of right-of-way. The existing signal at SR 1546 will be upgraded as a part of this segment.

Segment 2 - from the Adams Farm Parkway to the Bridford Parkway (0.3 miles)

It is recommended to widen this portion of the project to a five lane curb and gutter section 68 feet (20.7 m) wide from face-to-face of curbs with 10-foot (3.0-m) berms on 120 feet (36.6 m) of right-of-way. The 14-foot (4.3-m) outside lanes are necessary to accommodate bicycle traffic along this route.

The additional right-of-way is needed to accommodate double-left turns at each intersection. Bridford Parkway will require a double-left as a part of this project, while Adams Farm Parkway will require a double-left turn if it is ever upgraded to a multilane facility. The existing signal at the Bridford Parkway will require upgrading, while the Adams Farm Parkway intersection will require a new traffic signal. It is also recommended to realign SR 4105 (Hilltop Tr.) to form a four-leg intersection with the Bridford Parkway.

Segment 3 - from the Bridford Parkway to 1200' east of SR 1575 (Stanley Rd.) (1.1 miles)

It is recommended to widen this portion of the project to a five lane curb and gutter section 68 feet (20.7 m) wide from face-to-face of curbs with 10-foot (3.0-m) berms on 100 feet (30.5 m) of right-of-way. The 14-foot (4.3-m) outside lanes are necessary to accommodate bicycle traffic along this route. The five-lane section will taper to meet the existing four-lane curb and gutter section 1200 feet (365 m) east of SR 1575.

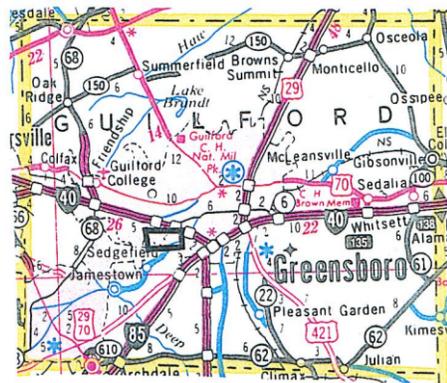
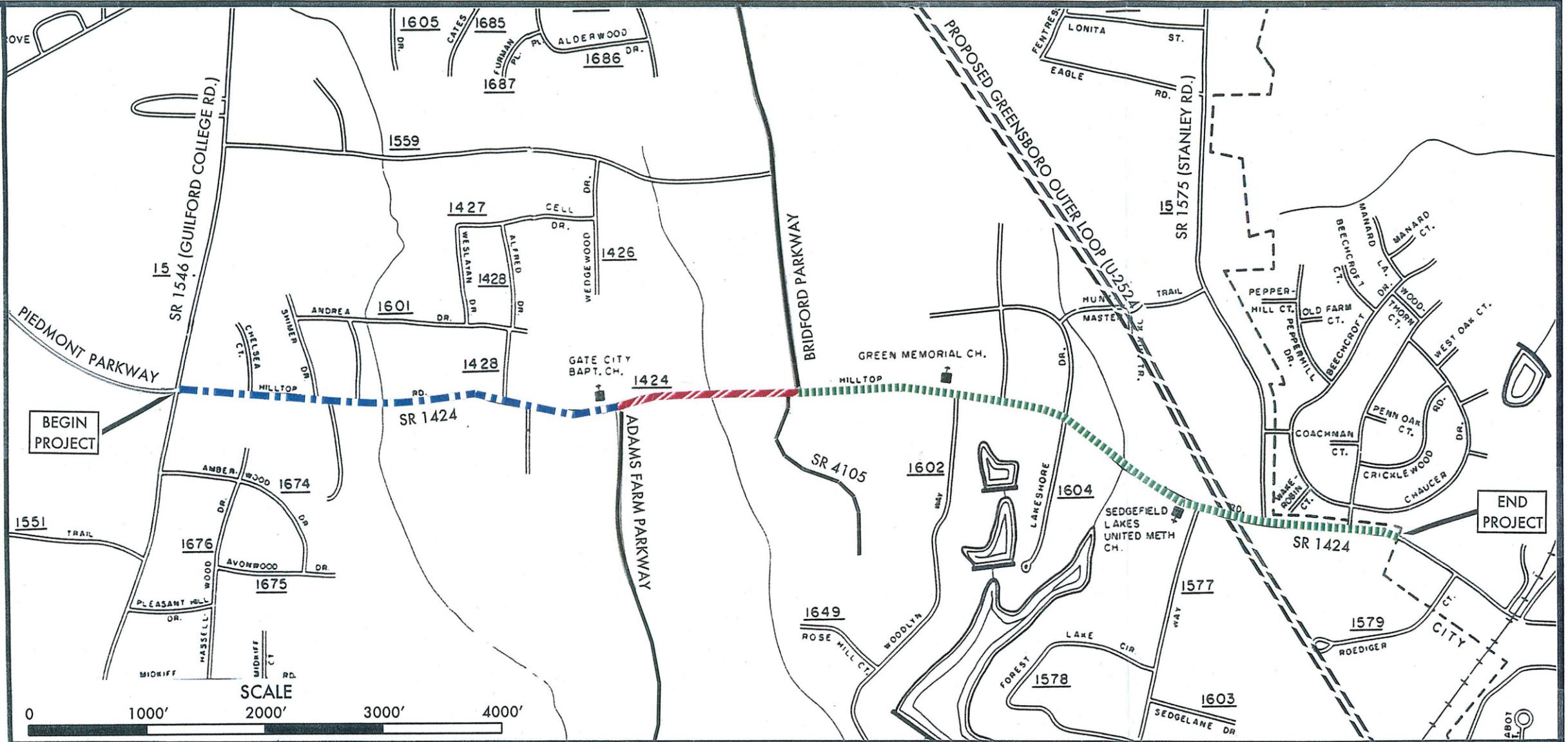
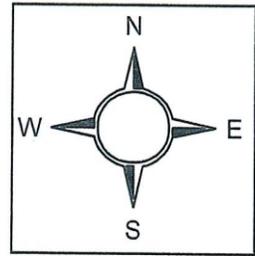
It is anticipated that two residences and no businesses will be relocated due to this project. The total cost of this project is as follows:

Construction.....	\$ 6,700,000
Right-of-way.....	\$ 2,100,000
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Total Cost .....	\$ 8,800,000

#### IV. 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.



LEGEND	
	SEGMENT 1 - PROPOSED 64' FIVE-LANE SECTION ON 100' R/W
	SEGMENT 2 - PROPOSED 68' FIVE-LANE SECTION ON 120' R/W
	SEGMENT 3 - PROPOSED 68' FIVE-LANE SECTION ON 100' R/W



NC DEPARTMENT OF TRANSPORTATION  
FEASIBILITY STUDIES UNIT

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**TO SR 1575 (STANLEY RD.)**  
**GREENSBORO**

DIVISION 7	GUILFORD COUNTY	FIGURE 1
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