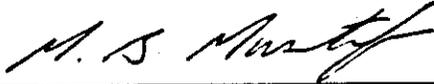


FEASIBILITY STUDY

NC 150
From SR 1508 to the Multi-Lane Section
in Winston-Salem
Davidson and Forsyth Counties
R-2709

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



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10/31/91
Date

NC 150
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I. GENERAL DESCRIPTION

This is a Feasibility Study for the widening of NC 150 from the multi-lane portion at SR 1508 in Davidson County, to the multi-lane portion in south Winston-Salem in Forsyth County (see the attached location map). Total project length is approximately 2.7 miles. The proposed improvement would include widening the existing two-lane pavement to a four-lane, median-divided highway with a 46-foot median. The preliminary estimate of the project cost is \$4,990,000 (\$ 360,000 for right-of-way, and \$4,630,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents recommended typical cross sections, general alignments, and estimated cost of the improvement. The study also attempts to provide an early identification of potential environmental, permitting, or other issues which deserve consideration in the planning and construction stages.

II. EXISTING CONDITIONS & NEED FOR PROJECT

This study was requested by Division 9. This section of NC 150 is an important link between several communities in south Winston-Salem and northern Davidson County to I-40 and the center of Winston-Salem. The recommended widening would extend the median-divided portion of NC 150 to the south. It is needed to meet increasing traffic demand on the roadway, and to minimize delays on this congested part of NC 150.

The studied section of NC 150 consists of a two-lane, 24-foot pavement with 8-foot shoulders. The south terminal of the project is approximately 0.1 mile north of SR 1508 in Davidson County. This is the end of a short four-lane section divided by a 4-foot median (see the attached location map). The north terminal of the project is at the beginning of the four-lane, median-divided section with a 30-foot median, approximately 1.4 mile north of the south city limits of Winston-Salem in Forsyth County. The length of the studied portion of NC 150 is 2.7 miles.

Existing right-of-way width is 200 feet, offset to the west of the existing two-lane roadway (127 feet west, and 73 feet east of the existing centerline). Access is not controlled.

Detailed traffic and turn-movement estimates were not available for this study. However, based on earlier traffic counts, it is estimated that the average daily traffic (ADT) in 1991 of NC 150 is 11,300 vehicles per day (vpd). Traffic volume is estimated to grow to 23,000 vpd by 2011.

Under existing conditions, and peak-hour traffic, it is estimated that the subject roadway is offering a level-of-service (LOS) D, and is expected to reach its traffic carrying capacity (LOS E) by the year 2011. With the recommended widening, the roadway would offer LOS A to present traffic volumes, and LOS C to the year 2011 anticipated traffic volumes.

During the period from February 1988 through January 1991, a total of 31 accidents were reported on the studied section of NC 150. The resultant total accident rate was 96.36 accidents per 100 million vehicle-miles, compared to a statewide average of 287.9 accidents per 100 million vehicle-miles on similar routes.

The area's topography is gently rolling. Land adjacent to the roadway is mainly wooded with light density residential development.

The major structure involved with this project is bridge #35 carrying NC 150 over Southfork Creek. The bridge is 135 feet long, with a clear roadway width of 28 feet. The bridge has a sufficiency rating of 65.8.

III. RECOMMENDATIONS

It is recommended that the 2.7-mile studied portion of NC 150 be widened to a four-lane, median-divided roadway with a 46-foot median, and 8-foot usable shoulders. This is to be accomplished by constructing a 46-foot median, and a new 28-foot pavement to the west side of the existing roadway. The existing 24-foot pavement would be widened to 28 feet (two 12-foot lanes, plus 2-foot paved shoulders inside and outside), and resurfaced.

It is anticipated that the majority of the widening would be contained within existing right-of-way. However, due to the rolling terrain, drainage and temporary construction easements may be required in some locations along the project. No control of access is recommended.

Two new structures would be required to carry the southbound lanes over branches of South Fork Creek. The new structures, estimated to be 100 and 135 feet in length, are to have a clear roadway width of 38 feet. The new structures are to be constructed parallel, and immediately to the west of existing bridges, which are to be retained to carry the northbound lanes. All estimates of structure lengths may be changed in accordance to hydrologic studies.

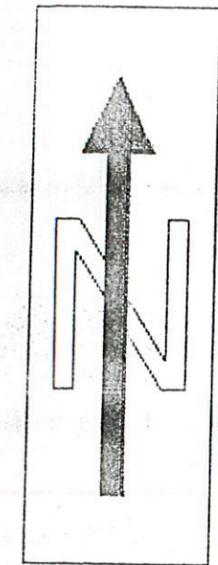
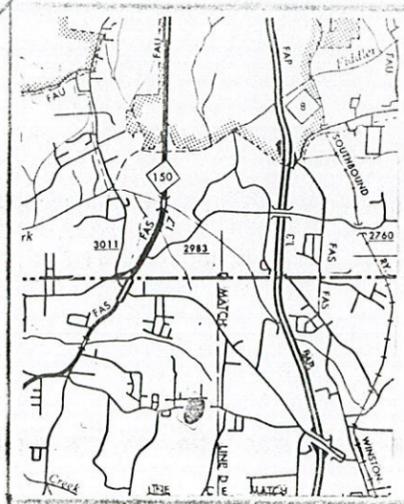
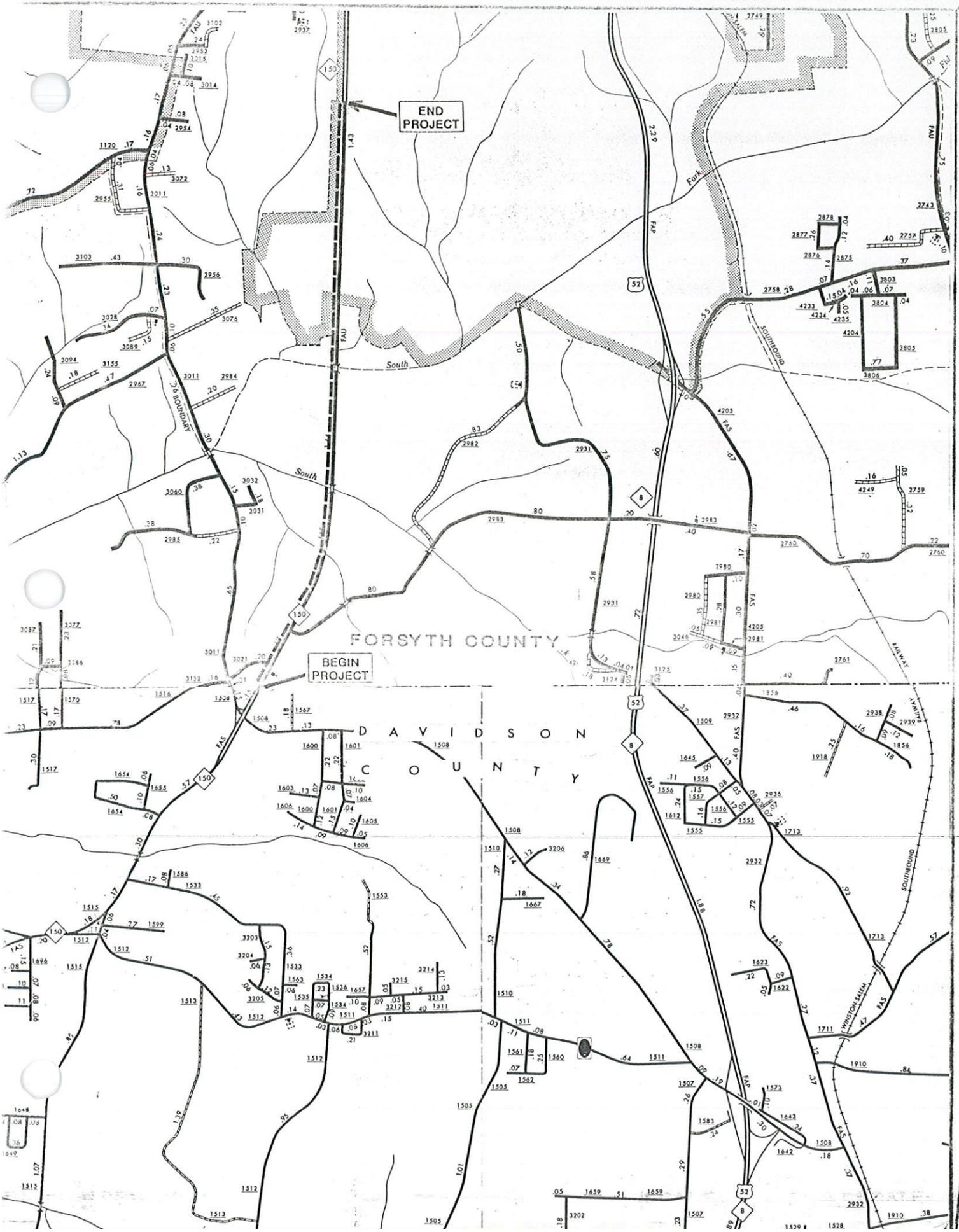
Estimated cost of the recommended improvements:

Right-of-way & Utilities	\$	360,000
Construction	\$	4,630,000

Total project cost	\$	4,990,000
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IV. OTHER COMMENTS & CONCERNS

It is anticipated that the project would impact wetlands at stream crossings. There are no structures, or districts located on the studied portion of NC 150 that are listed in, or eligible for listing in the National Register of Historic Places. It should be noted, that the Foltz House which is eligible for the National Register is located on SR 3011 near it's intersection with NC 150. There are eleven recorded archaeological sites within 0.5 mile of the project.



DAVIDSON, FORSYTH CO.
 NC 150 FROM MULTI-LANES NEAR
 SR 1508 TO MULTI-LANES IN
 FORSYTH COUNTY
 R-2709

SCALE: 1" = .5MILE DATE: APRIL 1991