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FEASIBILITY STUDY

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Concord-Kannapolis  
Westside Bypass Extension  
I-85 to NC 49  
Cabarrus County  
R-2246

Prepared by  
Planning and Research Branch  
Division of Highways  
N. C. Department of Transportation

July, 1987

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Westside Bypass Extension  
I-85 to NC 49  
Cabarrus County  
R-2246

The subject project is included in the 1987-1995 Transportation Improvement Program for feasibility study and/or right-of-way protection. This report provides a brief, initial analysis of possible improvements. The project is not currently funded.

I. GENERAL DESCRIPTION

The proposed project consists of extending the planned Westside Bypass of Concord and Kannapolis. The segment covered by this report (see pink line in Figure 1) extends from I-85 to NC 49. Provision of a four-lane curbed facility is recommended.

II. BACKGROUND

The Transportation Improvement Program includes a programmed project (U-2009) which is described as "Westside Bypass, Rainbow Drive to NC 73". This programmed project is represented by the orange line in Figure 1. After the Transportation Improvement Program was published, it became apparent to Cabarrus County and City of Concord officials that the alignment shown by the Kanlacon (Concord-Kannapolis-Landis-China Grove) Thoroughfare Plan (orange line plus yellow line) was not feasible due to development that has occurred within the corridor. As a result, steps were taken to modify the thoroughfare plan. The currently proposed corridor is shown by the green and pink lines in Figure 1. The programmed project (U-2009) is represented by the green line. It should be noted that the Transportation Improvement Program assumes the southern terminal of the programmed project will be NC 73 (based on old alignment). For purposes of this study, I-85 is assumed to be a more logical terminal (based on new alignment). It is anticipated that the next update of the T.I.P. will reflect this change.

The subject feasibility study is described in the T.I.P. as "Concord-Kannapolis, Westside Bypass Extension, NC 73 to NC 49". For purposes of this study, it is assumed the northern terminal should more logically be I-85 (rather than NC 73).

III. PURPOSE OF PROJECT

The purpose of the project is to implement a segment of the Kanlacon (Concord-Kannapolis-Landis-China Grove) Thoroughfare Plan by providing an important link in the outer loop thoroughfare system. The proposed

facility would provide a connection to I-85 and improve access to the western segments of Cabarrus County. The project would remove traffic from existing congested facilities (US 29 and US 29A), major traffic arterials linking Concord, Kannapolis, Landis, and China Grove. These existing facilities are encumbered by signals, numerous street and driveway connections, substantial roadside interference due to abutting development, speed zone restrictions, and turning traffic. These conditions result in limited capacity, slow travel speeds, time delays, congestion, and an unacceptable level of service.

The proposed "bypass" is expected to serve some of the through traffic currently utilizing US 29. The facility is also intended to serve local traffic generated from abutting properties. The project is envisioned as being a suburban type facility serving through traffic as well as local traffic generated by nearby development.

The project has received strong support from Cabarrus County and the City of Concord.

#### IV. EXISTING CONDITIONS

The studied facility begins at NC 49 southwest of Concord (See Figure 1); follows existing SR 1309 (Stough Road); includes a short segment of new location near Roberta Mill; follows existing SR 1310 (Roberta Church Road) to US 29; then on new location crossing SR 1431 (Weddington Road); and follows SR 1430 (Crisco Road) to I-85.

The existing routes to be utilized have pavement widths of 18 to 22 feet with generally good horizontal and vertical alignments. Development is primarily rural although some clusters of residential development are present. Considerable farmland, pastureland, and woodland exist; however, the development trend indicates the area will probably become suburban in nature within a few years.

Initial (1987) and projected (2007) traffic volumes are as follows:

	<u>1987</u>	<u>2007</u>
North of US 29	9,000 VPD	14,900 VPD
South of US 29	8,000 VPD	13,200 VPD

One bridge exists on SR 1309. Bridge No. 245 over Wolf Meadow Branch should be replaced. The structure has a width of 19.2 feet, length of 31 feet, and sufficiency rating of 33.1.

#### V. RECOMMENDED IMPROVEMENTS

The studied project consists of extending the planned Westside Bypass from I-85 to NC 49. The project is primarily along existing secondary roads but includes some new location. The recommended cross section is 52 feet, face to face of curbs. A right-of-way width of 100 feet will be required. Partial control of access is desirable.

The project has a total length of 6.5 miles, including the construction of 1.6 miles of new roadway and the upgrading of 4.9 miles of existing roadway.

The estimated cost of the project is as follows:

	<u>Construction</u>	<u>Right-of-Way</u>	<u>Total</u>
I-85 to US 29	\$4,500,000	\$ 600,000	\$ 5,100,000
US 29 to NC 49	\$4,500,000	\$1,000,000	\$ 5,500,000
Totals	<u>\$9,000,000</u>	<u>\$1,600,000</u>	<u>\$10,600,000</u>

Cost estimates were prepared by the Roadway Design Unit and Right-of-Way Branch.

#### VI. ALTERNATIVES

No alternative alignments were considered. The recommended location utilizes existing roads insofar as possible.

#### VII. POSSIBLE ENVIRONMENTAL IMPACTS

Possible environmental impacts are as follows:

1. Relocation of seven families
2. Use of additional land for highway purposes
3. Increase in noise levels

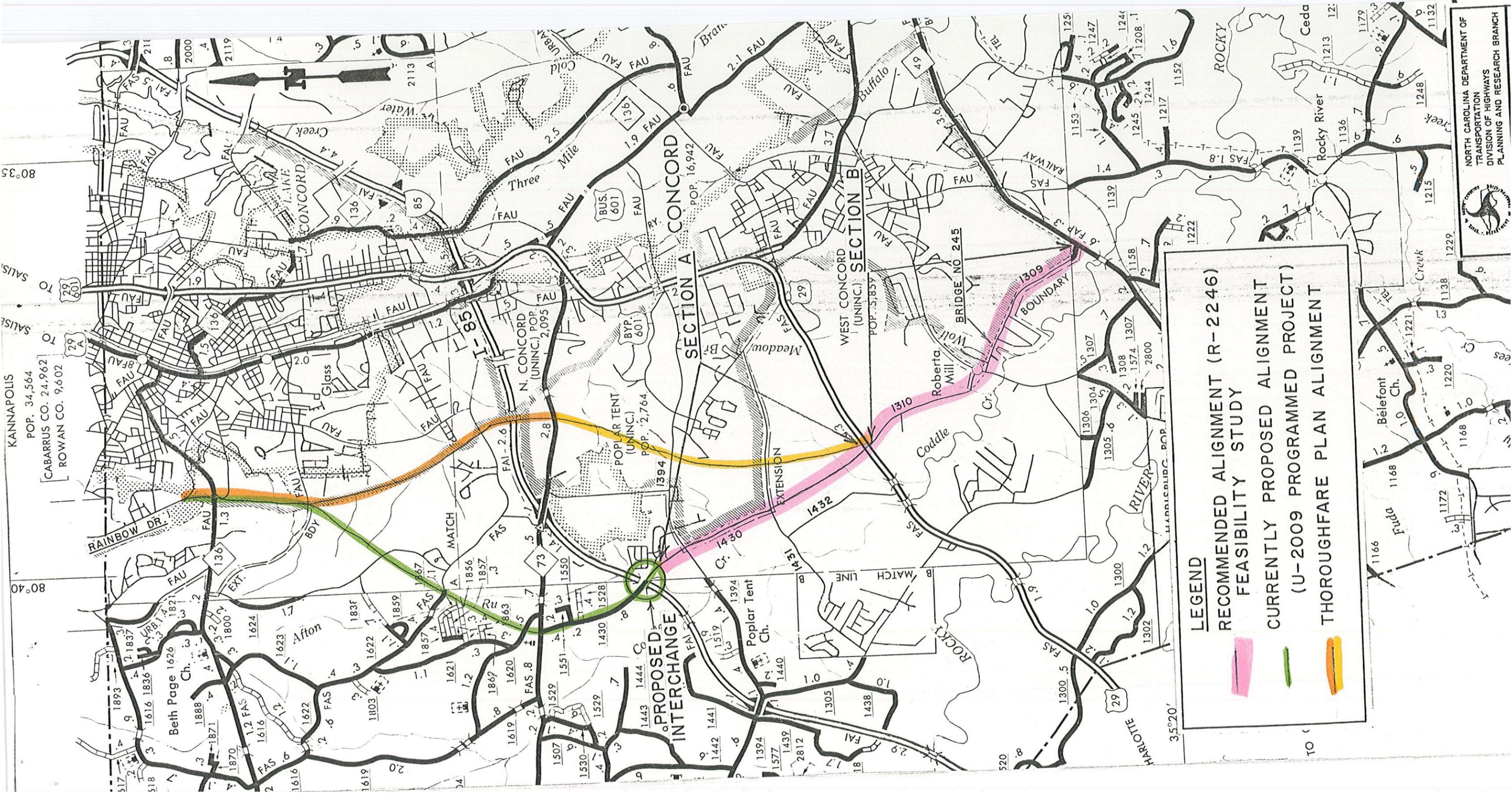
#### VIII. SUMMARY

The provision of a bypass facility through the western segment of Cabarrus County is a justifiable and needed project.

Functional design plans should be prepared to delineate right-of-way requirements. Local officials anticipate that a substantial portion of the right-of-way will be donated by developers.

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning and environmental document prior to that time, and a final decision made as to the most appropriate improvement.

PWE/rm



**LEGEND**

- RECOMMENDED ALIGNMENT (R-2246)  
FEASIBILITY STUDY
- CURRENTLY PROPOSED ALIGNMENT  
(U-2009 PROGRAMMED PROJECT)
- THOROUGHFARE PLAN ALIGNMENT