

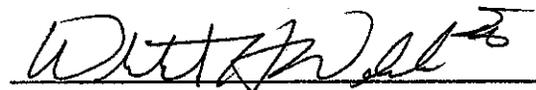
FEASIBILITY STUDY

Raleigh
Southern Wake Expressway
On New Location
From US 401 to I-40
Wake County
R-2828

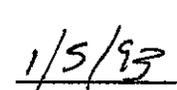
Prepared by
Program Development Branch
Division of Highways
N. C. Department of Transportation



W. J. Watson, P.E.
Highway Planning Engineer



Whitmel H. Webb, III, P.E.
Head of Feasibility Studies



Date

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I. GENERAL DESCRIPTION

This preliminary study describes proposed construction of the Southern Wake Expressway, an 8.7 mile segment of the Raleigh Outer Loop from US 401 to I-40. Please see Figure 1 for the project location. The proposed road will be a four lane, median divided freeway with full control of access. The proposed right of way width is 300 feet. All intersecting roads and railroads will be grade separated. The project typical cross section is shown on Figure 2.

Diamond interchanges are proposed at US 401, SR 1006, and NC 50. At I-40 a directional interchange is recommended.

The total estimated cost including construction and right of way is \$54,000,000. It is estimated there will likely be 25 residences and 2 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 the 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

The purpose of this project is to provide improved east-west traffic flow in the southeast sector of the Raleigh metropolitan area. This road is part of a future circumferential route that will encircle the Raleigh-Cary-Garner-Apex-Morrisville area. This project is on both the Wake County and the Greater Raleigh Urbanized Area Thoroughfare Plans and has strong local support. The main function of the completed loop will be to serve the longer distance trips in and around the area. Completion of the loop will provide greater access to Fuquay-Varina, Garner, and Wake Technical Community College, and will provide relief for the Wade Avenue/I-40 corridor between Raleigh and the Raleigh-Durham Airport complex which is now experiencing traffic volumes in excess of 80,000 vehicles per day.

Estimated 1990 traffic volumes for this project vary between 15,900 vehicles per day (vpd) and 20,900 vpd. Estimated 2010 traffic volumes vary between 31,100 vpd and 40,500 vpd. The estimated volumes are shown on Figure 3.

III. RECOMMENDATIONS

It is recommended to construct the Southern Wake Expressway, an 8.7 mile segment of the Raleigh Outer Loop from US 401 to I-40. Please see Figure 1 for the project location. The proposed road will be a 4-lane, median divided freeway with full control of access. The proposed right of way width is 300 feet. All intersecting roads and railroads will be grade separated. The project typical cross section is shown on Figure 2.

Diamond interchanges are proposed at US 401, SR 1006, and NC 50. At I-40 a directional interchange is recommended.

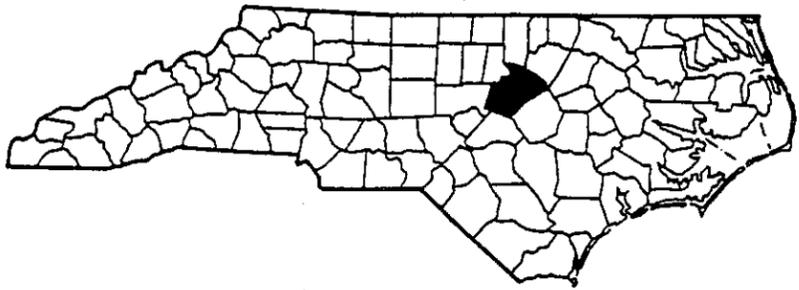
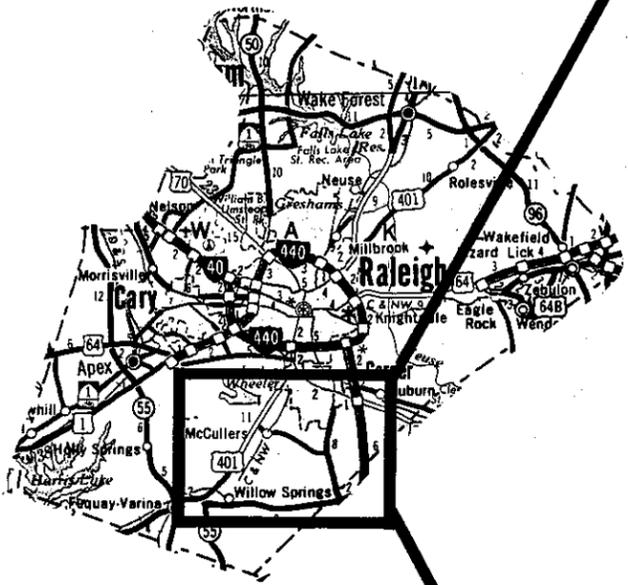
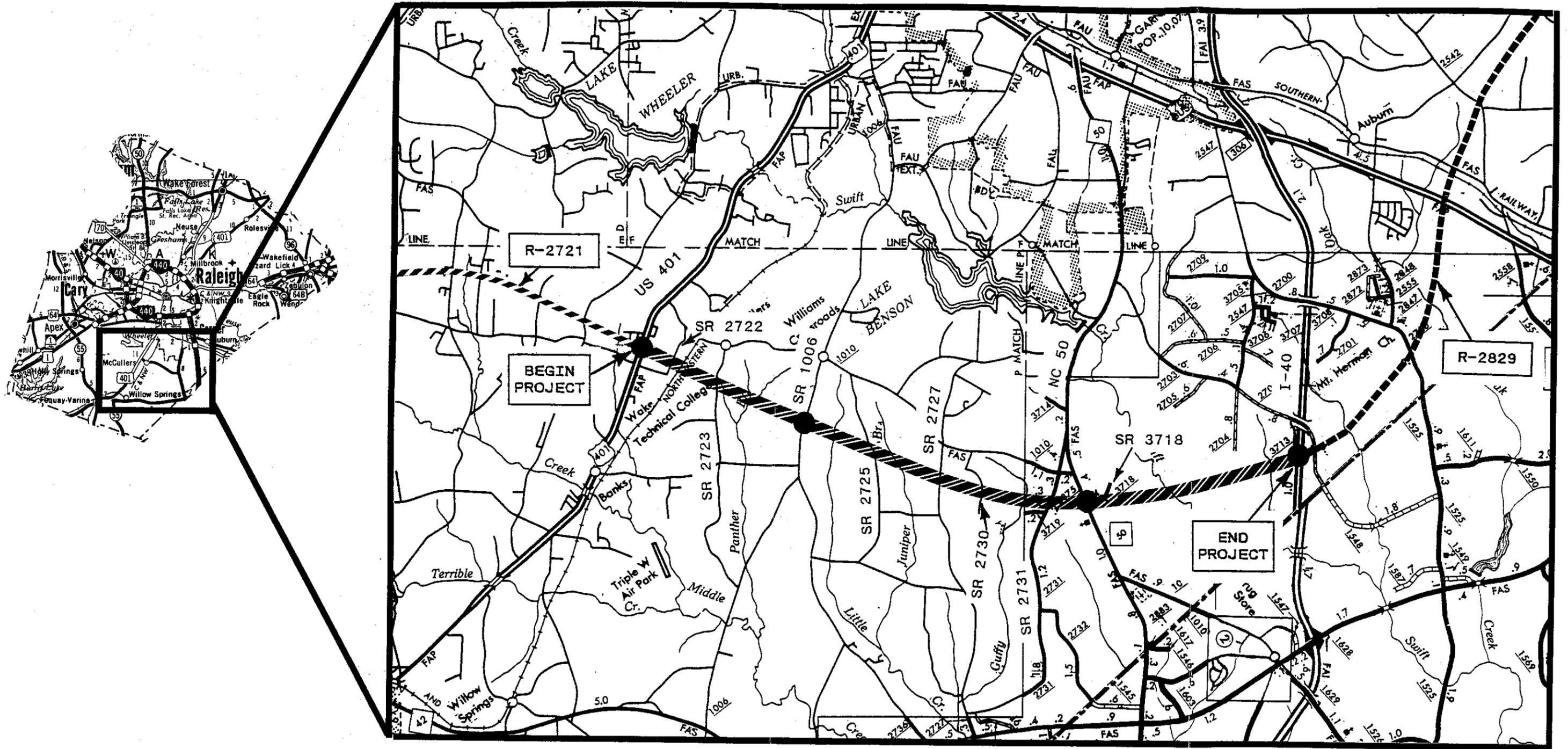
It is estimated there will likely be 25 residences and 2 businesses relocated due to this project. The total estimated cost including construction and right of way is \$54,000,000 as follows:

Construction	\$ 41,300,000
Right of Way	\$ 12,700,000
Total Cost	\$ 54,000,000

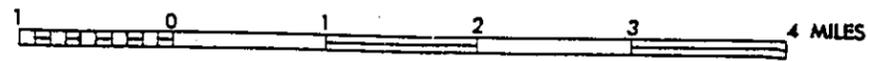
V. OTHER COMMENTS

The location for this route is as shown in the Greater Raleigh Urban Area Thoroughfare Plan. No other corridor locations were studied.

An environmental screening was not conducted for this study.



SCALE



LEGEND

PROPOSED INTERCHANGE: ●

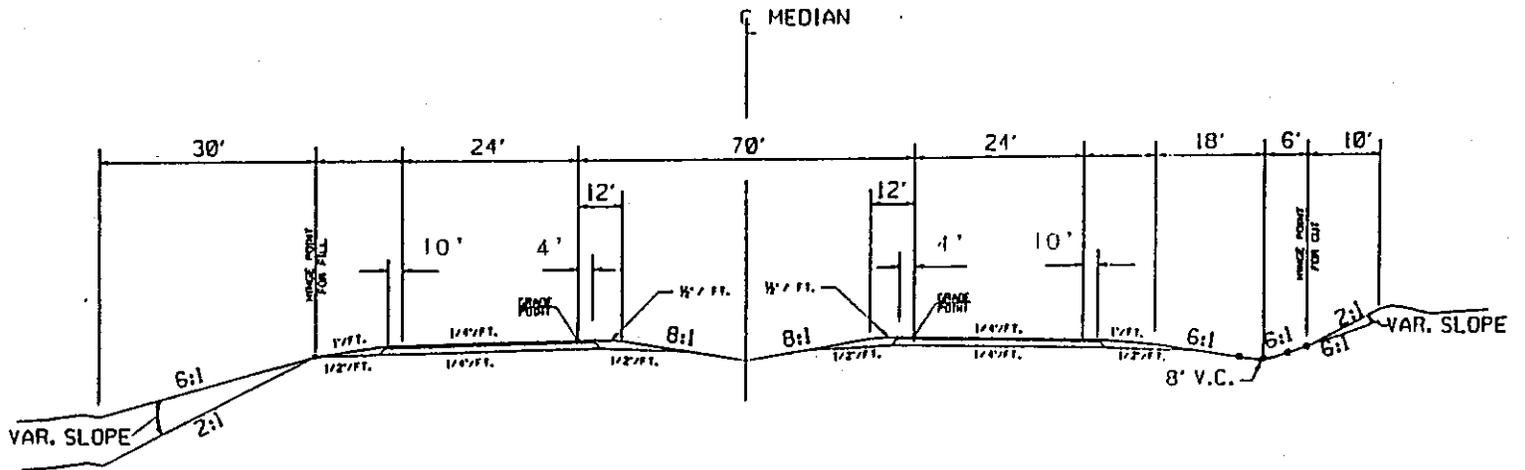
FEASIBILITY STUDIES UNIT

FIGURE 1. LOCATION MAP

SOUTHERN WAKE EXPRESSWAY
ON NEW LOCATION
FROM US 401 TO I-40

WAKE COUNTY

R-2828 DIV.5 FIGURE 1



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FIGURE 2. RECOMMENDED CROSS SECTION		
SOUTHERN WAKE EXPRESSWAY ON NEW LOCATION FROM US 401 TO 1-40		
R-2828	DIV. 5	FIGURE 2

SOUTHERN WAKE EXPRESSWAY
EST. 1990/2010 ADT IN HUNDREDS



			<u>144</u> 277	
I-40		<u>10</u> 18	<u>50</u> 100	
	<u>149</u> 250	<u>30</u> 62	<u>45</u> 90	<u>204</u> 360
			<u>159</u> 311	
NC-50		<u>8</u> 14	<u>25</u> 45	
	<u>70</u> 122	<u>50</u> 93	<u>33</u> 60	<u>70</u> 120
			<u>209</u> 405	
OLD STAGE ROAD SR-1006		<u>19</u> 37	<u>18</u> 35	
	<u>49</u> 94	<u>16</u> 29	<u>15</u> 27	<u>47</u> 90
			<u>203</u> 389	
US-401		<u>42</u> 77	<u>47</u> 87	
	<u>223</u> 400	<u>50</u> 90	<u>60</u> 108	<u>238</u> 428
			<u>224</u> 423	

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FIGURE 3. ESTIMATED TRAFFIC VOLUMES		
SOUTHERN WAKE EXPRESSWAY ON NEW LOCATION FROM US 401 TO I-40		
R-2828	DIV. 5	FIGURE 3