FEASIBILITY STUDY

Raleigh
Eastern Wake Expressway
On New Location
From I-40 to Proposed US 64 Bypass
Wake County
R-2829

Prepared by
Program Development Branch
Division of Highways
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I. GENERAL DESCRIPTION

This preliminary study describes proposed construction of the Eastern Wake Expressway, a 10.8 mile segment of the Raleigh Outer Loop from I-40 to the proposed US 64 Bypass (TIP project number R-2547). 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.

Directional interchanges are proposed at I-40 and at the proposed US 64 Bypass. Diamond interchanges are proposed at SR 2542 (Rock Quarry Road) and at SR 2700 (White Oak Road). A partial cloverleaf interchange is proposed at US 70. At SR 1007 (Poole Road) a half cloverleaf interchange with loops and ramps on the south side is proposed.

The total estimated cost including construction and right of way is $82,000,000. It is estimated there will likely be 45 residences and 5 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 traffic flow in and through the southeast sector of the Raleigh metropolitan area. This project will provide relief for the Raleigh Beltline between I-40 and US 64 which carries an estimated 45,000 to 60,000 vehicles per day.

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. Wake County is protecting this corridor based on a functional design provided by NCDOT.

Estimated 1990 traffic volumes for this project vary between 14,300 vehicles per day (vpd) and 25,100 vpd. Estimated 2010 traffic volumes vary between 27,600 vpd and 48,100 vpd. The estimated volumes are shown on Figure 3.

III. RECOMMENDATIONS

It is recommended to construct the Eastern Wake Expressway, a 10.8 mile segment of the Raleigh Outer Loop from I-40 to the proposed relocation of US 64 (TIP project number R-2547). 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.

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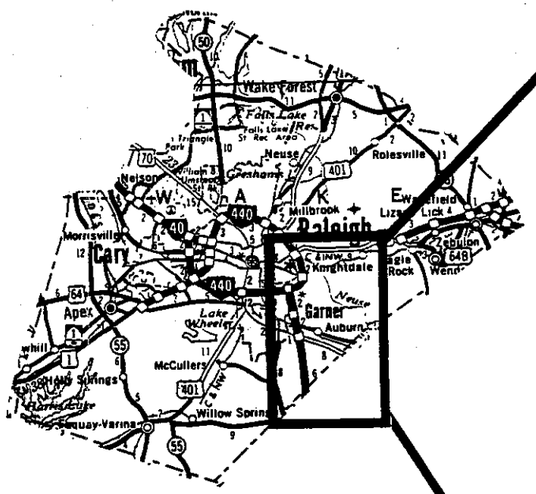
It is estimated there will likely be 45 residences and 5 businesses relocated due to this project. The total estimated cost including construction and right of way is $82,000,000 as follows:

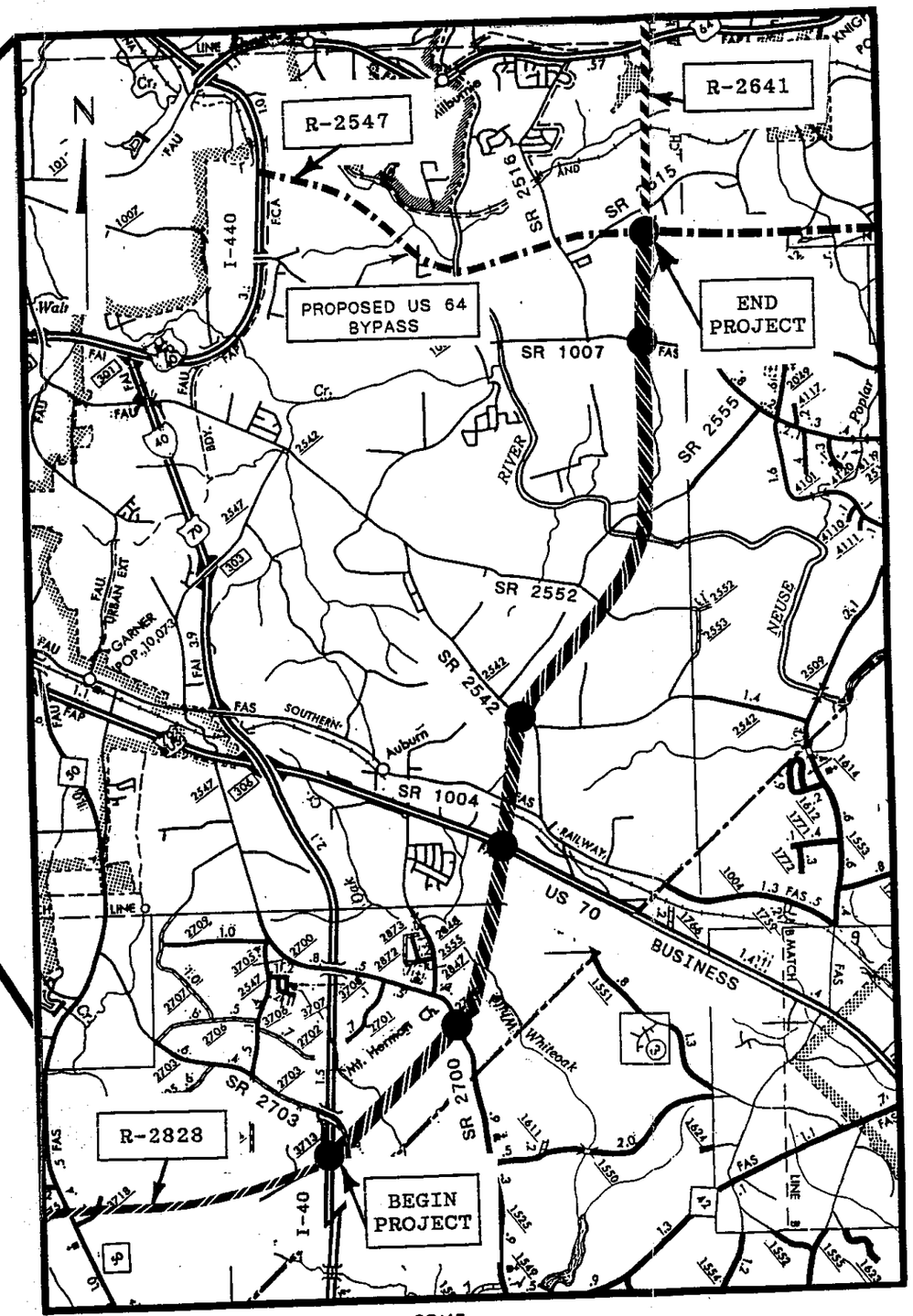
Construction	$ 58,000,000
Right of Way	$ 24,000,000
Total Cost	$ 82,000,000

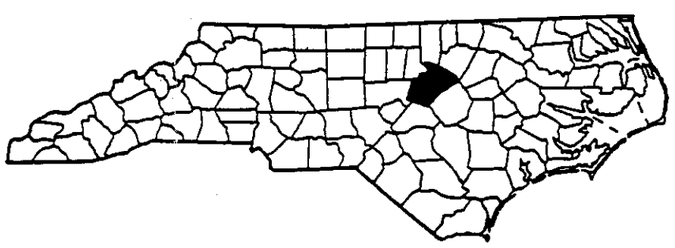
V. OTHER COMMENTS

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.

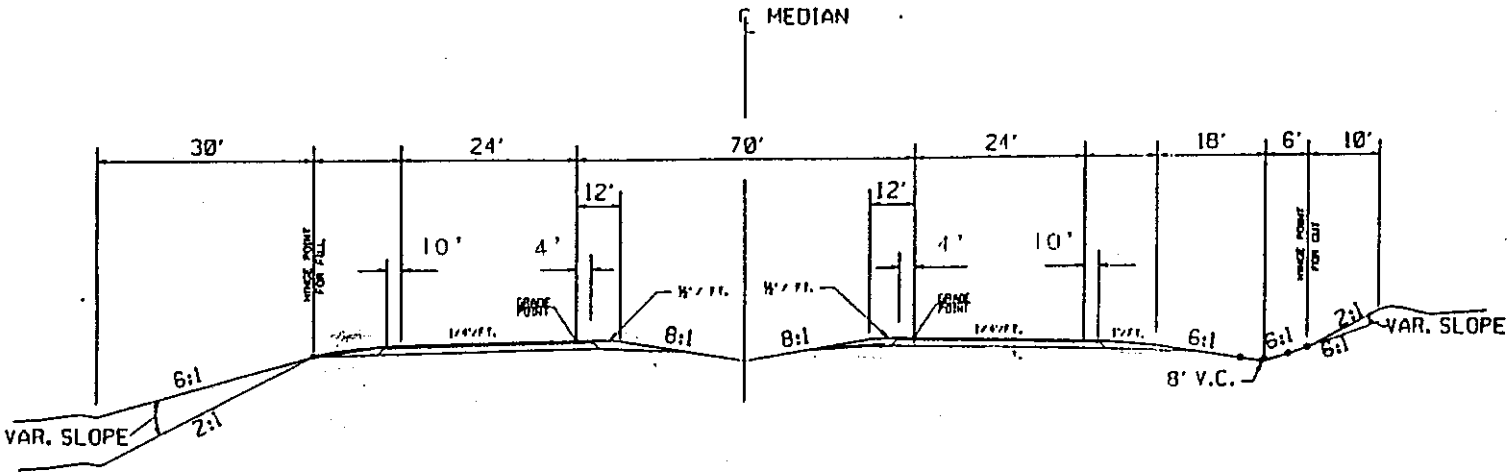






LEGEND
PROPOSED INTERCHANGE: ●

FEASIBILITY STUDIES UNIT		
FIGURE 1. LOCATION MAP EASTERN WAKE EXPRESSWAY ON NEW LOCATION FROM I-40 TO PROPOSED US 64 BYPASS WAKE COUNTY		
R-2829	DIV.5	FIGURE 1



FEASIBILITY STUDIES UNIT		
FIGURE 2. RECOMMENDED CROSS SECTION EASTERN WAKE EXPRESSWAY ON NEW LOCATION FROM I-40 TO PROP. US 64 BYPASS		
R-2829	DIV. 5	FIGURE 2

EASTERN WAKE EXPRESSWAY
EST. 1990/2010 ADT IN HUNDREDS

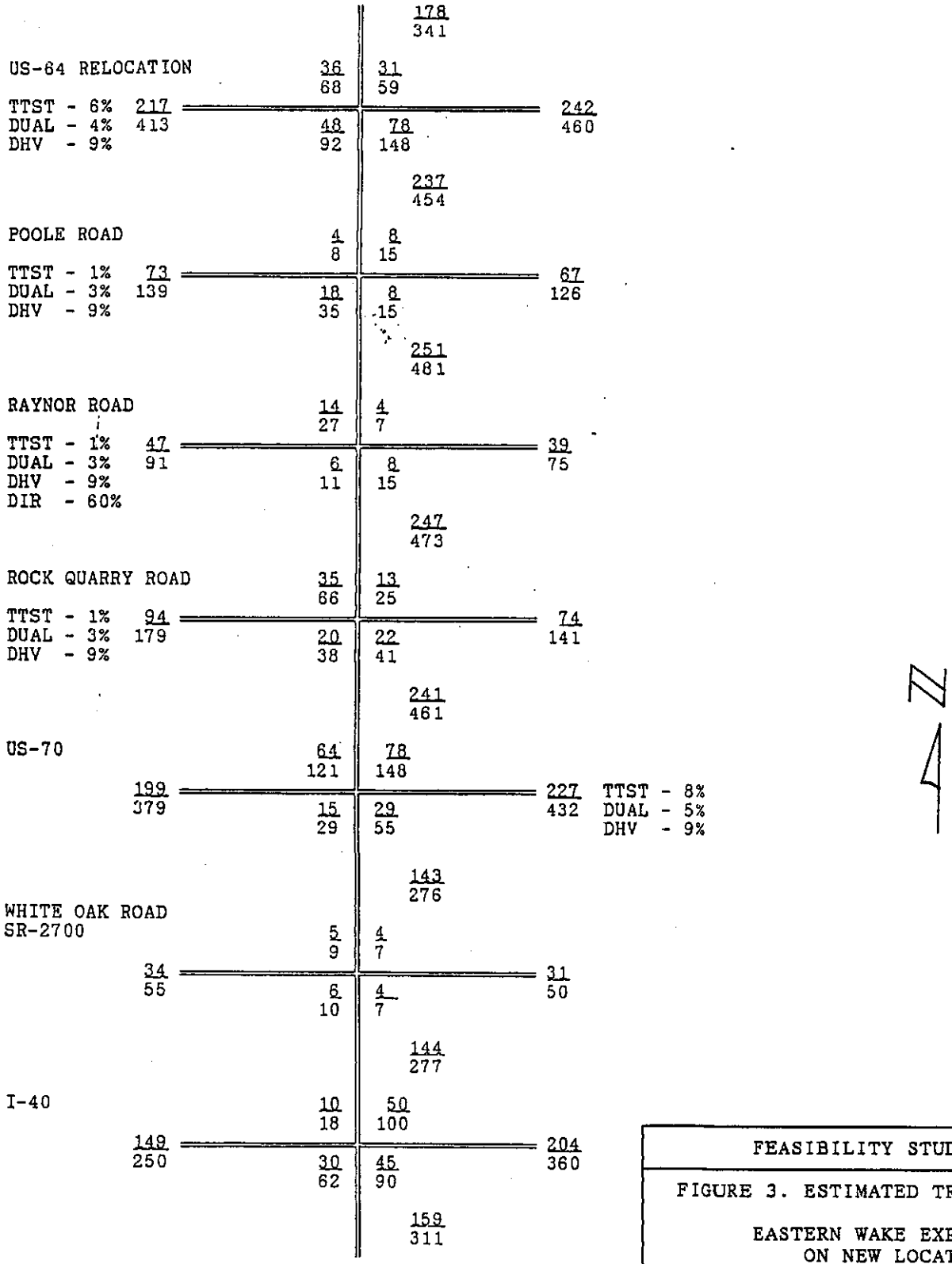


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FIGURE 3. ESTIMATED TRAFFIC VOLUMES EASTERN WAKE EXPRESSWAY ON NEW LOCATION FROM I-40 TO PROP. US 64 BYPASS
R-2829 DIV. 5 FIGURE 3