

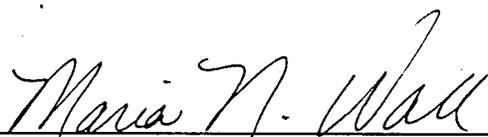
FEASIBILITY STUDY

US 74 Bypass

from NC 279 in Gaston County to  
the proposed Charlotte Outer Loop in Mecklenburg County

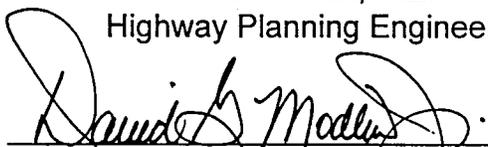
U-3321

Prepared by  
Program Development Branch  
Division of Highways  
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Date

# FEASIBILITY STUDY

## US 74 Bypass

from NC 279 in Gaston County to  
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### I. GENERAL DESCRIPTION

This is a feasibility study for the construction of the US 74 Bypass on new location from NC 279 in Gaston County to the proposed Charlotte Outer Loop in Mecklenburg County. (See Figure 1). The studied project corridor is approximately 5.9 miles (9.5 kilometers in length). The studied typical section is a four-lane, divided freeway with a 46-foot (14.0-meter) median on a 300-foot (91.5-meter) wide right-of-way with full access control. The estimated cost of the project is \$61,700,000 (\$7,900,000 for right-of-way and \$53,800,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents studied cross-sections for improvements, general corridors of improvements, and estimated costs of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues that deserve consideration in the planning and construction stages.

### II. NEED FOR PROJECT

The studied improvements would provide a traffic link between southern Gaston County and the Charlotte-Douglas Airport area in Mecklenburg County. The US 74 Bypass is shown as a freeway on new location on the Gaston Urban Thoroughfare Plan and the Mecklenburg-Union Thoroughfare Plan.

Land use along the studied corridor is agricultural, rural residential, waterfront development, and undeveloped woodland. The corridor crosses the South Fork of the Catawba River and the Catawba River. Also, the studied corridor intersects the Southern Railway on the west side of the Catawba River in Gaston County.

T.I.P. Project R-2248, the Charlotte Outer Loop, from I-77 South to I-85 North, in Mecklenburg County, proposes to construct a four-lane divided freeway on new location (See Figure 2). An interchange is proposed at the junction of

the proposed Charlotte Outer Loop, US 74 Bypass, and the West Boulevard Extension. The West Boulevard Extension is on the Mecklenburg-Union Thoroughfare Plan, however, it is not listed in the Transportation Improvement Program 1995-2001.

The estimated 1994 average daily traffic (ADT) for the studied corridor is 16,000 vehicles per day (vpd). In the design year 2020, anticipated traffic is estimated to be 36,000 vpd. The US 74 Bypass would operate at a level of service (LOS) A in 1994 and a LOS C in 2020. Truck volumes are estimated to be 16%.

### III. STUDIED IMPROVEMENTS

The studied US 74 Bypass corridor, from NC 279 in Gaston County to the proposed Charlotte Outer Loop in Mecklenburg County is approximately 5.9 miles (9.5 kilometers in length). The studied typical section is a four-lane, divided freeway with a 46-foot (14.0-meter) median on a 300-foot (91.5-meter) wide right-of-way with full access control. Diamond interchanges will be located at the junctions with NC 279 and NC 273. Several structures will have to be constructed along the study corridor, as listed below:

1. Bridge to carry NC 279 over US 74 Bypass (interchange)
2. Bridge to carry SR 3018 over US 74 Bypass (grade separation)
3. Two bridges to carry eastbound and westbound US 74 Bypass over the South Fork River
4. Bridge to carry NC 273 over US 74 Bypass (interchange)
5. Bridge to carry SR 2528 over US 74 (grade separation)
6. Railroad bridge to carry Southern Railway over US 74 Bypass
7. Two bridges to carry eastbound and westbound US 74 Bypass over the Catawba River
8. Bridge to carry SR 1150 over US 74 (grade separation)
9. Two bridges to carry eastbound and westbound US 74 Bypass over SR 1155
10. Additional culverts as needed at stream crossings

The major benefits of this project are that the Bypass would provide a traffic link between southern Gaston County and the Charlotte-Douglas Airport area in Mecklenburg County and provide traffic relieve for I-85 and US 70. The major disadvantages of this project are the average cost per mile (\$10.4 million/mile), disruption of several waterfront areas, and the number of relocations.

Moderate utility conflicts are expected.

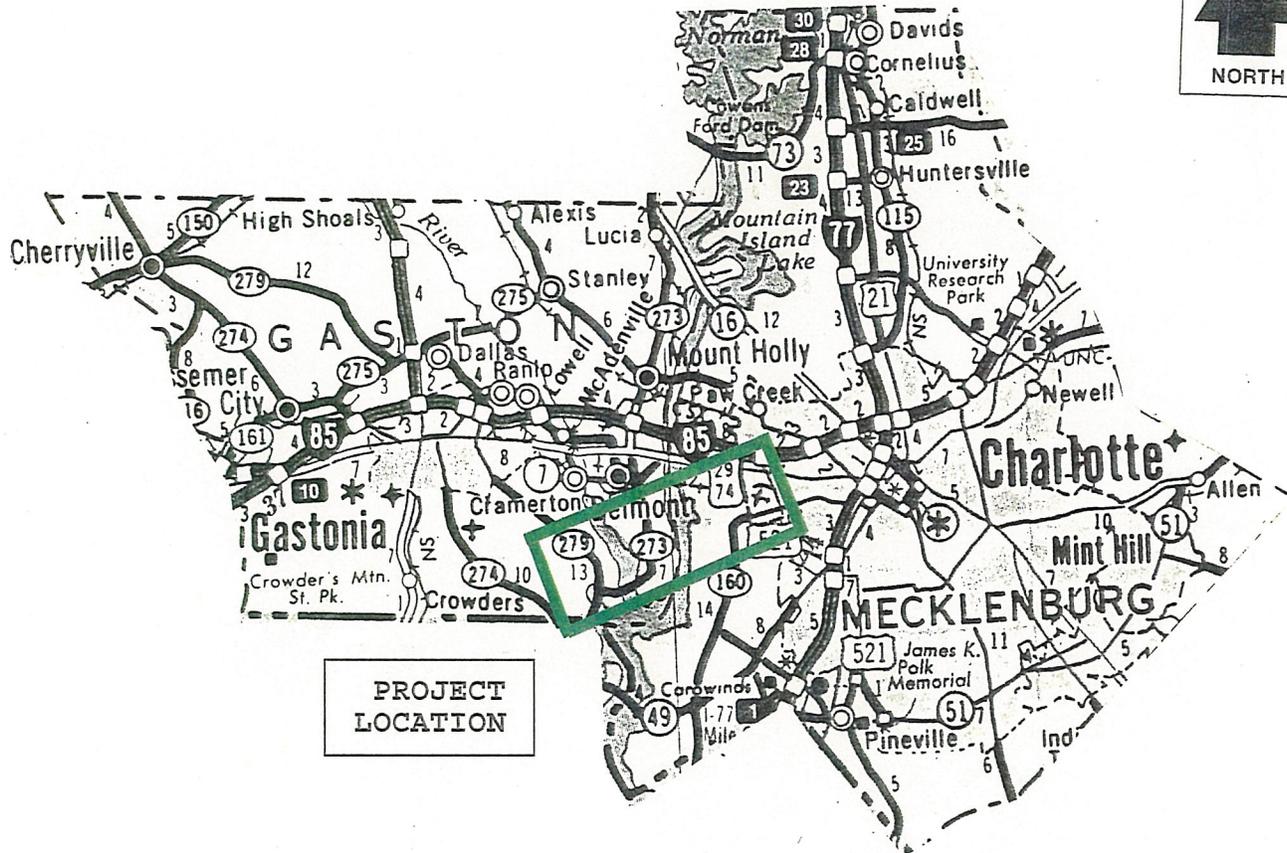
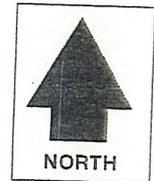
The estimated project costs for the studied project are as follows:

Construction	\$53,800,000
<u>Right-of-way</u>	<u>\$ 7,900,000</u>
Project Total	\$61,700,000

#### IV. OTHER COMMENTS AND CONCERNS

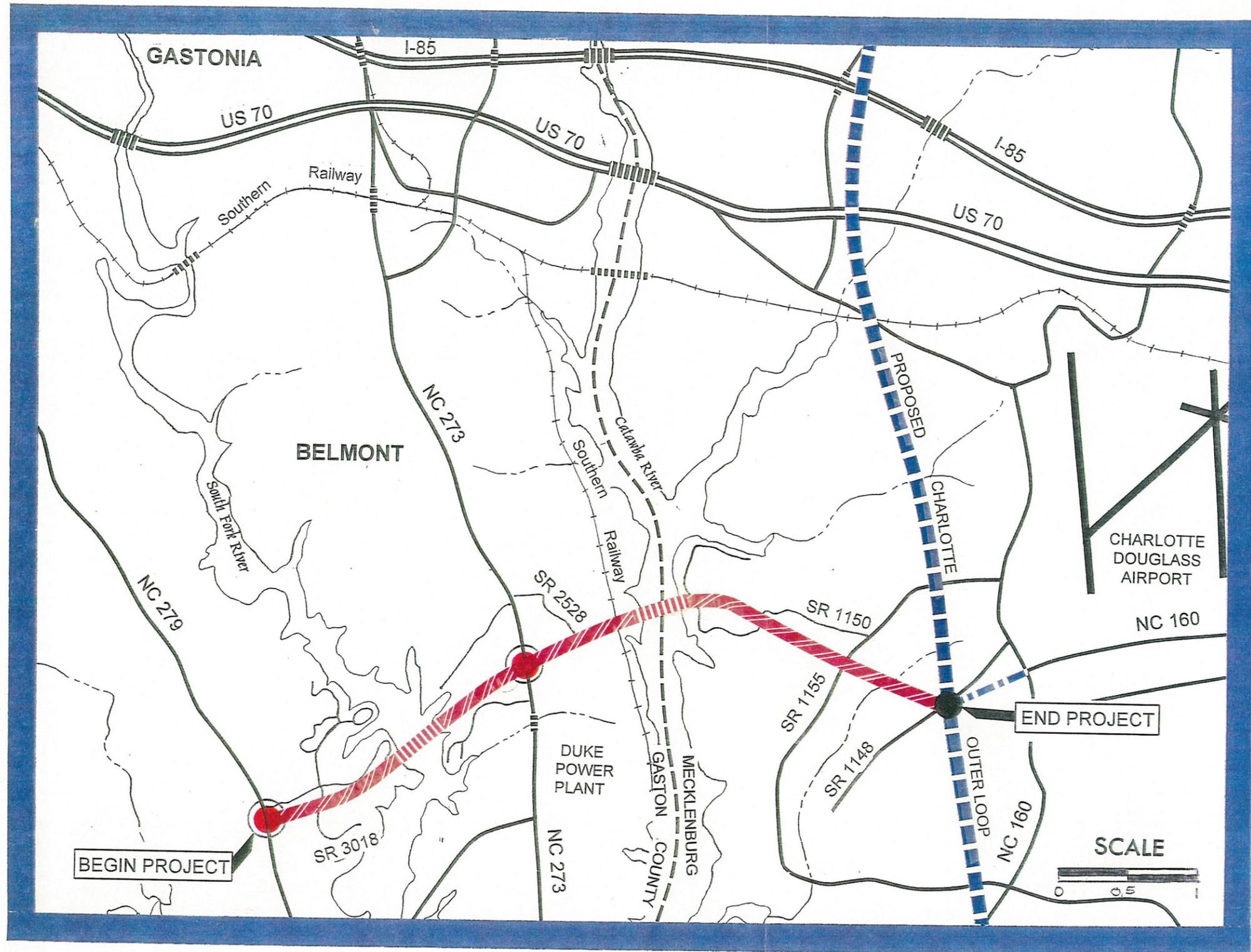
It is estimated that this project would require the relocation of 26 residences.

This project may involve placement of fill in wetlands, and may require a Corps of Engineers Section 404 Permit. A Section 401 Certification and a National Pollutant Discharge Elimination System (NPDES) Permit may be required from the North Carolina Division of Environmental Management. No historical or architecturally significant sites are known to be within the limits of the studied corridor.



**PROJECT  
LOCATION**

<b>FEASIBILITY STUDY UNIT</b>	
U-3321	
US 74 BYPASS	
from NC 279 to the proposed Charlotte Outer Loop	
Gaston & Mecklenburg Counties	
Divisions 12 & 10	FIGURE 1



LEGEND	
	US 74 Bypass (Study Corridor)
	Proposed Charlotte Outer Loop (TIP Project R-2248)
	Proposed West Boulevard Extension
	Proposed Interchange
	Studied Interchange
	Studied Bridge

Note: This figure does not show the location of all studied bridges, refer to report for further information on the location of the studied bridges.



FEASIBILITY STUDY UNIT	
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