

FEASIBILITY STUDY

Mount Holly

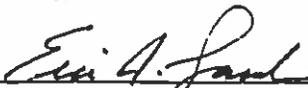
NC 273  
from south of Catawba Drive  
to S. Main Street  
Gaston County

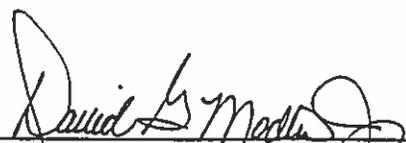
Division 12

U-3633



Prepared by the  
Program Development Branch  
Division of Highways  
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Date

Mount Holly  
NC 273  
from south of Catawba Drive  
to S. Main Street  
Gaston County  
U-3633

## I. General Description

This feasibility study describes widening NC 273 from south of Catawba Drive to S. Main Street, a distance of 1.0 miles (1.6 km). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs with 10-foot (3.0-m) berms, on 100 feet (30.5 m) of right-of-way with no access control. It is anticipated that there will be no residences or businesses relocated due to this project. The total cost of the project, including construction and right-of-way, is estimated to be \$3,500,000.

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 this study is to describe the proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

## II. Need for Project

The purpose of this project is to alleviate congestion within the project corridor. This project is supported by the Gaston Urban Area Metropolitan Planning Organization (MPO) and by the Town of Mount Holly.

NC 273 is designated as a major thoroughfare in the Gastonia Urban Area Thoroughfare Plan and as a principal urban arterial in the North Carolina Statewide Functional Classification System.

From south of Catawba Drive to north of Fites Creek, development is mostly residential, with access to small subdivisions. North of Fites Creek, there is a multifamily residential apartment complex and several businesses interspersed with single family homes on both sides of the roadway.

NC 273 is currently a two-lane roadway with a pavement width of 24 feet (7.3 m) with soil shoulders. South of Catawba Drive, NC 273 is a four-lane divided facility with soil shoulders and a 4-foot (1.2-m) grassy median. North of S. Main Street, NC 273 (Highland Ave.) is a two-lane roadway that is 24 feet (7.3 m) wide.

There is an unlisted culvert at Fites Creek, which appears to be a triple 8-foot by 8-foot (2.4-m x 2.4-m) reinforced concrete box culvert.

There are existing signals at the intersections with Rankin Avenue / Tuckaseegee Road and with S. Main Street.

There is a high-power transmission line tower located 17 feet (5.2 m) from the existing edge of pavement south of the intersection with Forest Hills Drive. This tower will require relocation if any widening is done in this area.

The 1996 Average Daily Traffic (ADT) along NC 273 is 23,000 vehicles per day (vpd). For the design year 2025, the estimated traffic volumes on NC 273 will be 46,000 vpd. Truck traffic is estimated to make up four percent of daily traffic.

Currently NC 273 is operating at Level of Service (LOS) F. If no improvements are made, it is projected that the roadway will continue to operate at LOS F in the design year 2025. If NC 273 is widened to a five-lane curb and gutter section, the facility will operate at LOS C in the current year and at LOS D in the design year 2025.

During the three-year period from May 1993 to April 1996, there were 86 accidents reported on NC 273 within the project limits. There were 32 injuries reported as a result of these accidents, including no fatalities. The accident rate along NC 273 within the project limits is 426.38 accidents per 100 million vehicle miles (acc/100mvm). This compares with the 1994 statewide rate of 282.10 acc/100mvm for two-lane urban NC routes.

### **III. Recommendations**

It is recommended to widen NC 273 from south of Catawba Drive to S. Main Street, a distance of 1.0 miles (1.6 km). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section, 64 feet (19.5 m) wide from face-to-face of curbs with 10-foot (3.0-m) berms, on 100 feet (30.5 m) of right-of-way with no access control.

It is anticipated that no residences or businesses will be relocated due to the project. The total cost of the project is as follows:

Construction.....	\$ 2,800,000
Right-of-way.....	\$ 700,000
<hr/>	
Total Cost .....	\$ 3,500,000

#### IV. Alternates

Due to the high amount of current and projected traffic volumes for this project, it may be foreseeable to further widen NC 273 in the future. The cost of purchasing a total of 120 feet (36.6 m) of symmetrical right-of-way for this project would change the total cost estimate as follows:

Construction.....	\$ 2,800,000
Right-of-way.....	\$ 900,000
<hr/>	
Total Cost .....	\$ 3,700,000

#### V. Other Comments

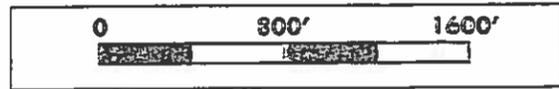
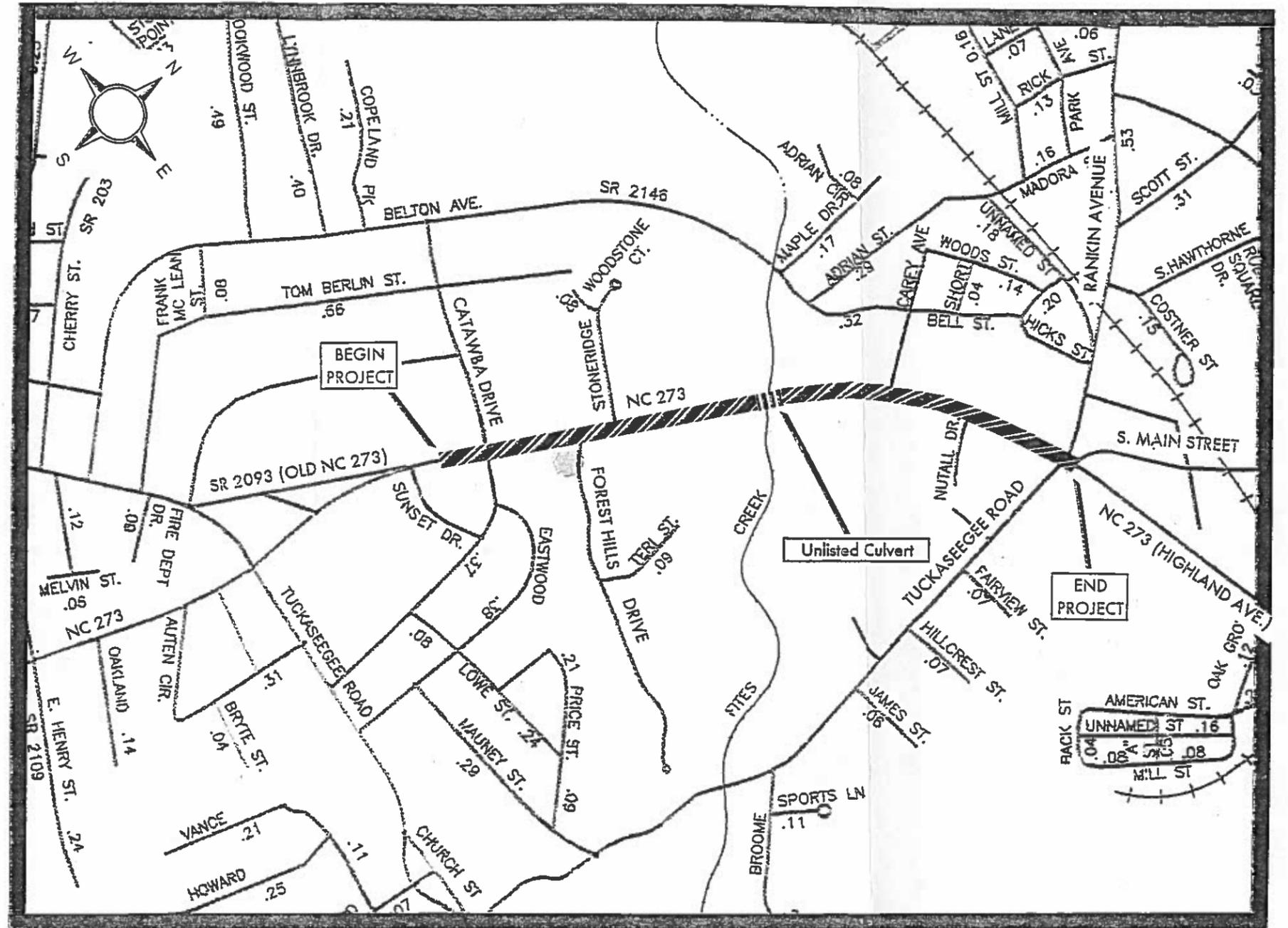
An environmental screening was not conducted for this study. However, no impacts to historic properties are anticipated.

Based on maps at the Department of Environment, Health & Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.

Impacts to wetlands are expected in the vicinity of the culvert at Fites Creek and a Corps of Engineers Section 404 Permit is anticipated. Also according to GIS surveys, the entire project is within a protected water supply watershed.

This section of Fites Creek within the project corridor is classified WS-IV and is part of the Catawba River Basin.

No special accommodation for bicycles is recommended on this project.



LEGEND	
	PROPOSED FIVE-LANE SECTION
	EXISTING CULVERT
	EXISTING HIGH-POWER TRANSMISSION TOWER

NC DEPARTMENT OF TRANSPORTATION  
 FEASIBILITY STUDIES UNIT

U-3633  
 NC 273  
 FROM SOUTH OF CATAWBA DRIVE  
 TO S. MAIN STREET  
 MOUNT HOLLY

DIVISION 12 | GASTON COUNTY | FIGURE 1