

FEASIBILITY STUDY

U. S. 220 Business
From Old Liberty Road to U. S. 311
Asheboro, Randolph County
T.I.P. # U-2200

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

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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 subject study reviewed the proposed widening U. S. 220 Business from Old Liberty Road (SR 2261) to U. S. 311, a distance of 4.2 miles. The location of the project is shown on the attached Figure 1. On-the-ground photographs are also shown on Figure 2.

Widening the subject roadway to five lanes, 64 feet face-to-face of curbs with gutters has been studied and appears to be feasible.

II. PURPOSE OF PROJECT

A. Existing Roadway

U. S. 220 Business is a major thoroughfare in the Asheboro Thoroughfare Plan. The subject roadway is also a major north-south connector between Asheboro and Greensboro (20 miles to the north).

The existing roadway is 52 feet face-to-face of curbs at the beginning of the project (about 700') in the vicinity of Old Liberty Road. The roadway then transitions into a 22-foot travelway with 6 to 8-foot shoulders (4' paved), and finally transitions to a 22-foot roadway with 6 to 8-foot shoulders (2' paved) midway of the project. In addition, left turn lanes have been added at four major intersections along the studied roadway.

U. S. 220 Business crosses Hasketts Creek about midway along the subject section. The existing bridge at this location has a 22 foot travelway and is 32 feet face-to-face of curbs. The bridge is 46 feet long and has no posted weight restrictions. This reinforced concrete structure has a sufficiency rating of 90.1 and an estimated remaining life of 16 years.

Horizontal and vertical alignment along the roadway are good through this area of rolling terrain.

Speed limits along the studied section vary from 45 m.p.h. near Old Liberty Road to 50 m.p.h. midway of the project and 55 m.p.h. near U. S. 311.

Right of way along the project is that which is maintained, approximately 50 to 60 feet in width.

Utilities located along the shoulders of most of the project include power poles, water lines, sewer lines, and gas lines.

B. Traffic, Capacity, and Accident Data

Existing traffic along the subject section of U. S. 220 Business ranges from 7500 to 9000 vehicles per day, projected future traffic (year 2007) along the roadway is 15,000 to 30,000 vehicles per day.

The existing roadway is operating at an approximate level of service D, but will not be able to provide a good level of service for projected traffic volumes.

Accident records along the subject section for the period of January, 1984 through February, 1987 show a total of 139 accidents and no fatalities. The accident rate during this period was 3.45 accidents per million vehicle miles as compared to a statewide average of 3.43 ACC/MVM for similar roadways. Most of the accidents were "rear end slow or stop" (31.7%), "left turn - same road" (22.3%), and "angle" (18.0%).

C. Need for Project

The subject facility is located in the northern part of Asheboro in a partially developed and rapidly expanding area. Several new residential, commercial, and industrial sites are currently being developed along the project. This facility is also carrying high and expanding volumes of traffic between Asheboro and Greensboro.

Widening the subject roadway will aid the expansion of economic development in Asheboro and will help maintain a safe roadway for motorists.

III. STUDIED IMPROVEMENTS AND COST ESTIMATES

The most desirable and feasible improvement for the project appears to be a five-lane roadway with curbs and gutter. A roadway section 64 feet face-to-face of curbs was studied for the project. It is anticipated that widening would be symmetrical about the existing centerline.

The project also involves a crossing of Hasketts Creek. Cost estimates for the project were based on widening the existing structure at Hasketts Creek to accommodate the proposed five lane roadway.

Right of way estimates for the project are based upon an estimated 85-foot wide right of way plus construction easements. Right of way estimates also include costs for relocating 4 businesses and 2 residences, acquisition, and utility adjustments.

Cost estimates for the project are as follows:

Construction	\$4,800,000
Right of way	\$3,548,000
TOTAL	<u>\$8,348,000</u>

The project's cost and impact might be reduced by using a 59-foot section in the vicinity of Old Liberty Road. This would need to be determined by a more detailed study.

IV. POSSIBLE ENVIRONMENTAL IMPACTS

The most significant impact associated with this project would be the possible displacement of 4 businesses and 2 residences. This impact might be lessened by narrowing the proposed cross section in the vicinity of Old Liberty Road.

No significant impacts to the natural environment are anticipated as a result of this project. The project does involve a crossing of Hasketts Creek. However this crossing is anticipated to be classified as a "minor roads crossing" and should not involve a significant amount of fill material below the mean high water level.

No special permits or coordination are anticipated to be required for the project.

Based on conversations with officials of the City of Asheboro, the subject project has strong local support and is considered to be of high priority.

V. BASIS FOR FINDING

The information and recommendations of this report are based on the following:

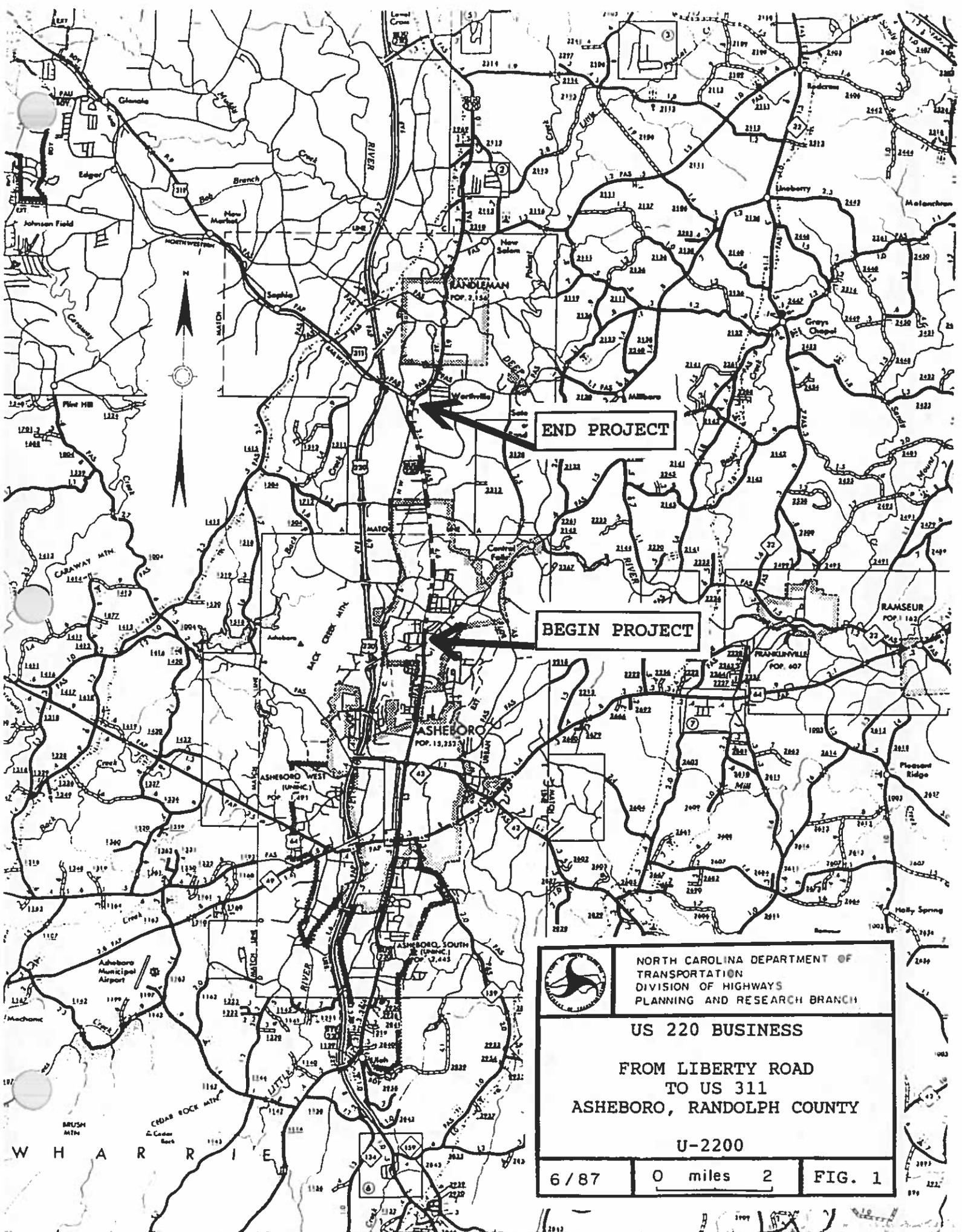
1. Field Investigation
2. Input from the Thoroughfare Planning Unit
3. Contacts with Asheboro's City Manager and City Engineer
4. Conversation with the Assistant Division Engineer
5. Aerial mapping at 1"=500'
6. Accident reports from the Traffic Engineering Branch
7. Construction cost estimates from the Roadway Design Unit
8. Right of way cost estimates from field personnel of the Right of Way Branch

VI. ADDITIONAL COMMENTS

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/environmental document prior to that time, and a final decision made as to the most appropriate improvement.

In view of development that is occurring along the proposed project corridor, the City of Asheboro is encouraged to direct development such as to protect right of way for the project and to insure good traffic operations.

LVP/rm



END PROJECT

BEGIN PROJECT


 NORTH CAROLINA DEPARTMENT OF
 TRANSPORTATION
 DIVISION OF HIGHWAYS
 PLANNING AND RESEARCH BRANCH

US 220 BUSINESS
 FROM LIBERTY ROAD
 TO US 311
 ASHEBORO, RANDOLPH COUNTY
 U-2200

6 / 87 0 miles 2 FIG. 1

US 220 BUSINESS
FROM LIBERTY ROAD TO US 311
ASHEBORO, RANDOLPH COUNTY
U-2200



LOOKING NORTH
AT BEGINNING OF
PROJECT



MIDWAY OF PROJECT



HASKETT'S CREEK
BRIDGE

FIGURE 2