R-2201

FEASIBILITY STUDY

King
Tobaccoville Road (SR 1611) - Main Street (SR 1112)
From RJ Reynolds Entrance to Meadowbrook Road (SR 1105)
Forsyth and Stokes Counties
R-2201

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

October, 1987

King
Tobaccoville Road (SR 1611) - Main Street (SR 1112)
From RJ Reynolds Entrance to Meadowbrook Road (SR 1105)
Forsyth and Stokes Counties
R-2201

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 proposed project consists of widening Tobaccoville Road (SR 1611) from the entrance to the RJ Reynolds Tobacco plant to the Forsyth-Stokes County line and Main Street (SR 1112) from the county line to Meadowbrook Road (SR 1105) to a five-lane roadway (see Figure 1). The project is located in and near King and has an overall project length of approximately 1.7 miles.

II. EXISTING CONDITIONS

The proposed project has been divided into the following sections (see Figure 2):

Section 1 - RJ Reynolds entrance to the ramp terminals north of US 52, a distance of approximately 0.4 mile.

Section 2 - Ramp terminals north of US 52 to Kirby Road (SR 1115), a distance of approximately 0.6 mile.

Section 3 - Kirby Road to Meadowbrook Road (SR 1105), a distance of approximately 0.7 mile.

Section 1 consists of a two-lane roadway with 24 feet of pavement and 6-foot grass shoulders. Tobaccoville Road is carried over US 52 by a two-lane bridge with a clear roadway width of 28 feet. This bridge was constructed in 1962. There are existing signals at both intersections of the project with the US 52 ramp terminals. The posted speed limit along this section is 45 mph, and the existing right of way appears to be approximately 50 feet. The development along this section is a mixture of commercial and industrial use; however, the majority of the land is undeveloped.

Section 2 consists of a five-lane, 48-foot face to face of curbs, roadway. This section was originally constructed as a four-lane roadway, but it has recently been re-striped as a narrow (9-foot travel lanes) five-lane roadway. There are existing traffic signals at Jefferson Church Road (SR 1108) and Kirby Road (SR 1115). The posted

speed limit is 35 mph. The right of way along this section is assumed to be approximately 60 feet, and the development along Section 2 is primarily strip commercial.

Section 3 consists of a two-lane roadway with 24 feet of pavement and 4 to 6-foot grass shoulders. A small stream is piped under Main Street through a 72" metal pipe just south of Meadowbrook Road (SR 1105). The posted speed limit is 35 mph. The existing right of way width appears to be approximately 50 feet. The development along this section is a mixture of residential and commercial uses.

III. PURPOSE OF PROJECT

The studied segment of Tobaccoville Road/Main Street is designated as a major thoroughfare in the King Thoroughfare Plan and functions as a main radial route connecting King with US 52. The current average daily traffic volumes (ADT) along the project ranges from 8,200 vehicles per day (vpd) south of US 52 to 13,200 vpd near Kirby Road. By the year 2007 the ADT is expected to increase to 13,100 vpd south of US 52 to 21,100 vpd near Kirby Road. Approximately 5% of the vehicles are trucks (3% dual tired, 2% TTST).

As previously discussed the development along Section 2 is medium density commercial use and serves as the major commercial area for King. Since the opening of the R. J. Reynolds Tobacco plant, the project area has shown a strong growth in residential and commercial activity. This growth is expected to continue.

IV. STUDIED IMPROVEMENTS

Based on the recent and anticipated increase in commercial and residential development in the area, a five-lane roadway is necessary along the project to handle the traffic volumes at a desirable level of service. Four travel lanes are needed to handle the through traffic, and the center turn lane is needed to reduce the congestion created by turning vehicles at the numerous intersections and driveways.

V. RECOMMENDATIONS

A five-lane, 64-foot face to face of curbs, roadway within 90 feet of right of way is recommended along the project. Since Sections 1 and 3 are currently two-lane roadways, priority should be given to the widening of these two sections. The improvements along Section 1 include widening the bridge over US 52 to five lanes with a deck width of 64 feet. It is anticipated that 1 residence and 2 businesses will be relocated as a result of the widening along Section 3. The estimated costs of widening Sections 1 and 3 are as follows:

Section 1

Construction	$1,500,000
Right of Way	240,000
Total	$1,740,000

Section 3

Construction	$ 700,000
Right of Way	1,360,000
Total	$2,060,000

The estimated total cost of widening Sections 1 and 3 is approximately $3,800,000 which includes $1,600,000 for right of way and $2,200,000 for construction.

Although Section 2 of the project has narrow travel lanes, field observations indicate that the roadway is adequately handling the existing traffic volumes. When an increase in traffic volumes and/or an increase in the percentage of trucks adversely affect the traffic handling capabilities along this section, Section 3 should be widened to a five-lane, 64-foot face to face of curbs, roadway. The estimated cost is as follows:

Section 2

Construction	$ 550,000
Right of Way	1,225,000
Total	$1,775,000

All right of way costs are based on symmetrical widening.

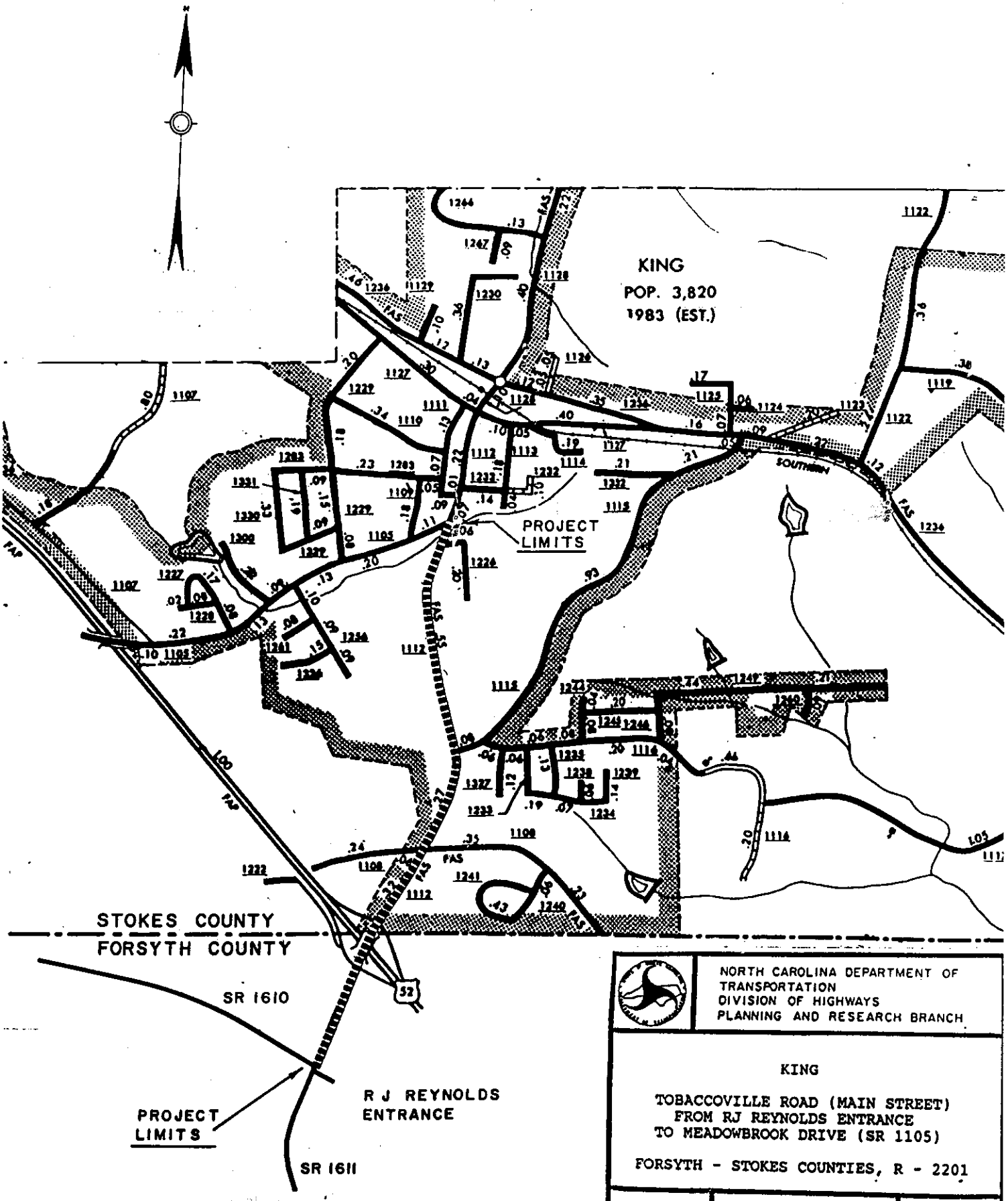
VI. ENVIRONMENTAL IMPACTS

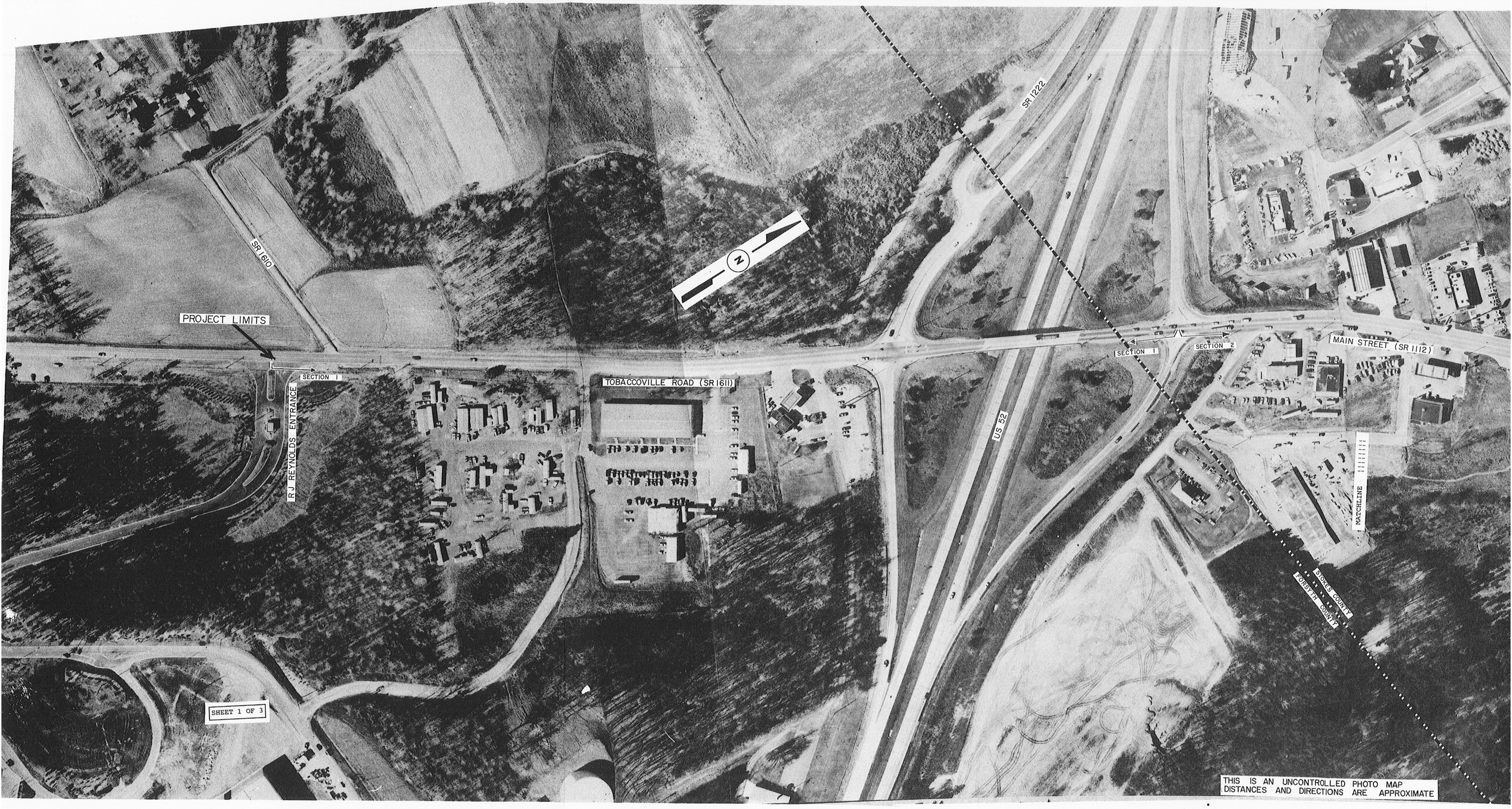
No significant adverse environmental impacts are anticipated as a result of this project. A small stream is piped under the existing roadway just south of Meadowbrook Road, but the adherence to standard erosion control measures will minimize the effects of siltation to the stream.

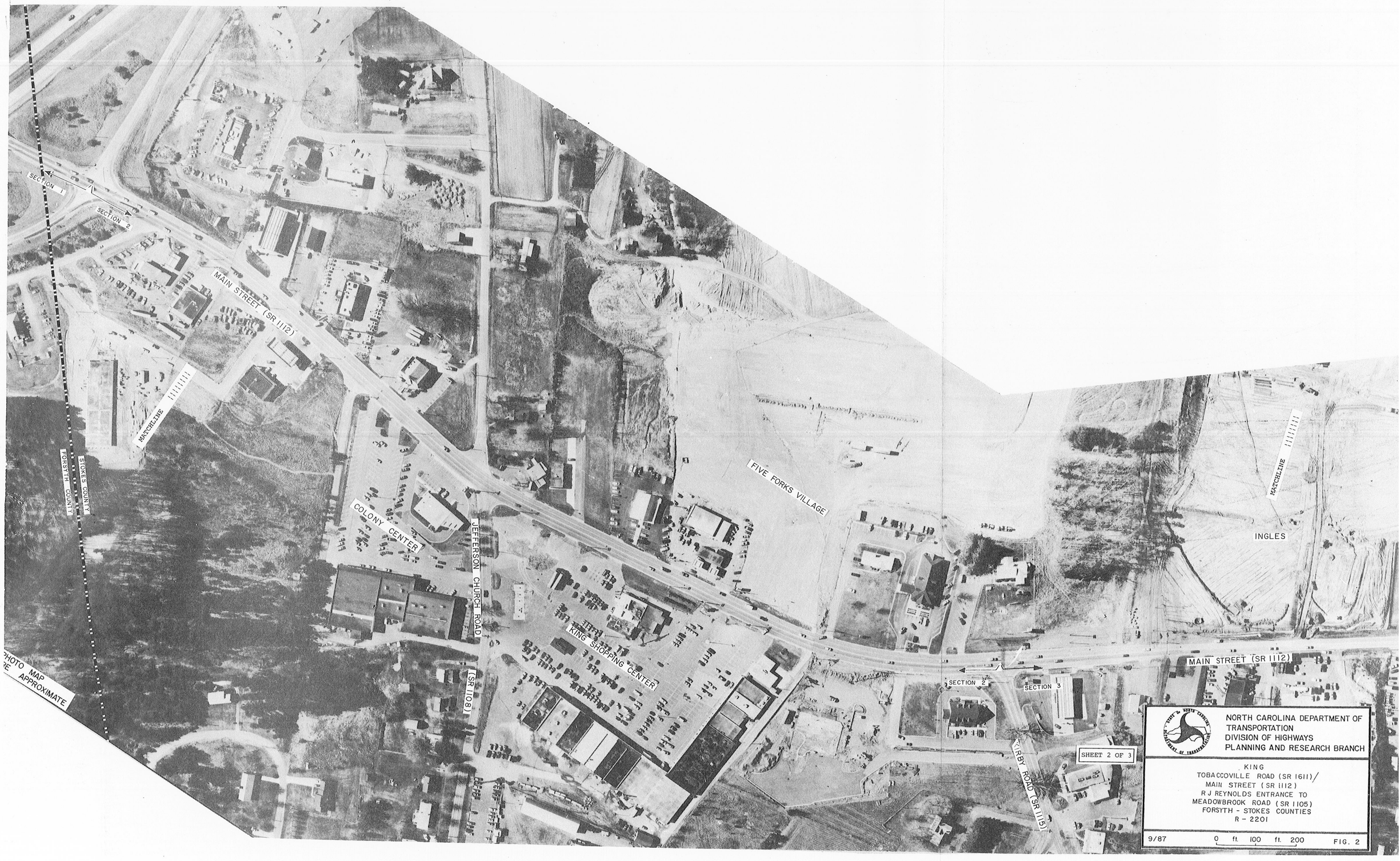
VII. BASIS FOR STUDY

The findings contained in this report are based on field investigations and discussions with the Division, City Manager, and Roadway Design Unit. Construction cost estimates and right of way cost estimates are based on field investigations and aerial photography.

WRE/wp


KING
POP. 3,820
1983 (EST.)
PROJECT LIMITS
SOUTHERN
STOKES COUNTY
FORSYTH COUNTY
SR 1610
R J REYNOLDS ENTRANCE
PROJECT LIMITS
SR 1611
52
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH
KING
TOBACCOVILLE ROAD (MAIN STREET)
FROM RJ REYNOLDS ENTRANCE
TO MEADOWBROOK DRIVE (SR 1105)
FORSYTH - STOKES COUNTIES, R - 2201
6/87
0 mile 1/3
FIG. 1


SR 1610
PROJECT LIMITS
SECTION 1
R J REYNOLDS ENTRANCE
TOBACCOVILLE ROAD (SR 1611)
SR 1222
US 52
SECTION 1
SECTION 2
MAIN STREET (SR 1112)
MATCHLINE
STOKES COUNTY
FORSYTH COUNTY
N
SHEET 1 OF 3
THIS IS AN UNCONTROLLED PHOTO MAP
DISTANCES AND DIRECTIONS ARE APPROXIMATE

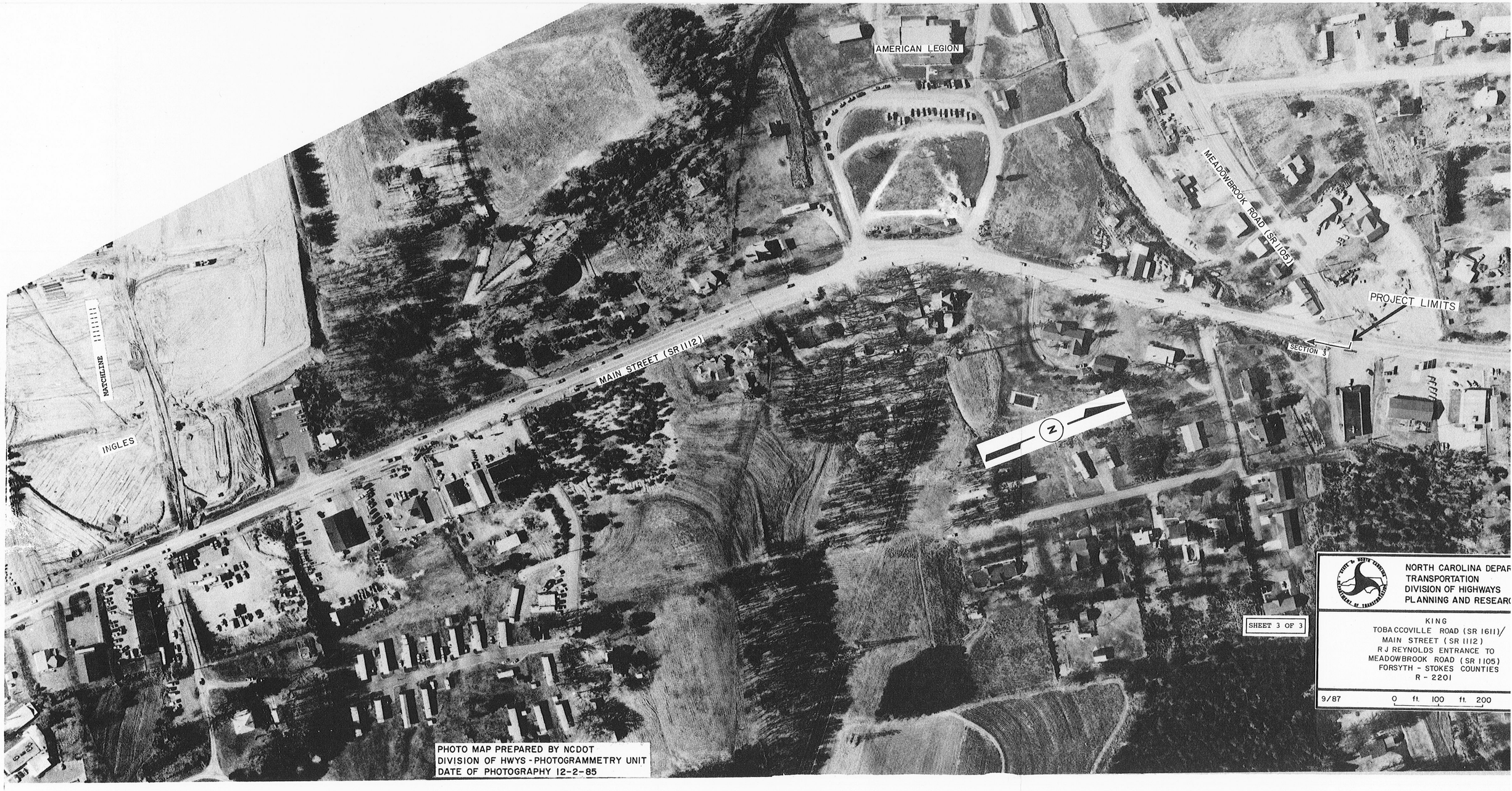


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH

SHEET 2 OF 3

KING
TOBACCOVILLE ROAD (SR 1611)/
MAIN STREET (SR 1112)
R J REYNOLDS ENTRANCE TO
MEADOWBROOK ROAD (SR 1105)
FORSYTH - STOKES COUNTIES
R - 2201

9/87 0 ft. 100 ft. 200 FIG. 2


AMERICAN LEGION
MEADOWBROOK ROAD (SR 1105)
PROJECT LIMITS
SECTION 3
MAIN STREET (SR 1112)
MATCHLINE
INGLES
N
SHEET 3 OF 3
NORTH CAROLINA DEPAR
TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARC
KING
TOBACCOVILLE ROAD (SR 1611)/
MAIN STREET (SR 1112)
R J REYNOLDS ENTRANCE TO
MEADOWBROOK ROAD (SR 1105)
FORSYTH - STOKES COUNTIES
R - 2201
9/87
0 ft. 100 ft. 200
PHOTO MAP PREPARED BY NCDOT
DIVISION OF HWYS - PHOTOGRAMMETRY UNIT
DATE OF PHOTOGRAPHY 12-2-85